

Task Order Agreement No.	BK1741
Master Agreement No.	BK1760
Effective (NTP) Date	
Task Order Amount	C+FF \$186,094.53

ON-CALL PROFESSIONAL SERVICES TASK ORDER AGREEMENT LPA PROJECTS

CITY OF LINCOLN
JEO CONSULTING GROUP, INC.
PROJECT NO. TAP-55(182)
CONTROL NO. 13366
BEAL SLOUGH TRAIL

THIS AGREEMENT, is between the City of Lincoln ("LPA") and JEO Consulting Group, Inc.

("Consultant"), and collectively referred to as the "Parties".

WHEREAS, in accordance with the terms of the On-Call Professional Services Master Agreement No. BK1741 ("Master Agreement"), LPA, or Nebraska Department of Transportation ("State") on LPA's behalf, has selected Consultant to be available to provide preliminary engineering ("Services") for LPA's Federal-aid project identified as Project No. TAP-55(182), and

WHEREAS, the Parties wish to enter into a task order agreement ("Task Order"), to provide for the completion of the Services for the project for which Consultant has been selected, and

WHEREAS, solely for convenience, consistency and in an attempt to obtain federal funding for Consultant services, the Parties intend that this Task Order include some of the provisions of a July 12, 2017 Master Agreement for on-call preliminary engineering services between Consultant and State, and

WHEREAS, this Task Order is to specify the duties and obligations of the Parties for the Services described herein, and

WHEREAS, Consultant and LPA intend that the Services provided by Consultant comply with all applicable federal-aid transportation project related program requirements so that Consultant's costs under this Task Order will be eligible for federal reimbursement, and

WHEREAS, the LPA and Consultant intend that this Task Order be completed in accordance with the terms and conditions of the Nebraska LPA Guidelines Manual for Federal Aid Projects; hereinafter referred to as LPA Manual (See definition in Section 1), and

WHEREAS, Consultants primary contact for LPA's project is LPA's Responsible Charge when LPA is managing the project, and

WHEREAS, Consultant's primary contact for LPA's project is State's Project Coordinator when State is managing the project on behalf of LPA, and

WHEREAS, Consultant's primary contact for State's project is State's Project Coordinator.

WHEREAS, the Parties understand that State is involved in this federal-aid project on behalf of the FHWA only for issues related to the eligibility of the project for reimbursement of project costs with federal-aid funds.

NOW THEREFORE, in consideration of these facts, Consultant and LPA agree as follows:

SECTION 1. CONTACT INFORMATION

Contact information, for the convenience of the Parties, is as follows:

1.1 Consultant Project Manager

Firm Name	JEO Consulting Group, Inc.
Address	2700 Fletcher Avenue, Lincoln, NE, 68504
Project Manager's Name	Nathan Boone
Project Manager's Phone	402-474-8745

1.2 Subconsultant Project Manager

Firm Name	Terracon
Address	3220 N. 20 th Suite 3,
Project Manager's Name	Bradley Levich
Project Manager's Phone	402-466-3911

1.3 State Project Coordinator

Name	Jared Rockmann
Phone Number	402-479-3843

1.4 LPA RC

Name	Sara Hartzell
Phone Number	402-441-8261

1.5 State Agreements Specialist

Name	Dawn Knott
Phone Number	402-479-4414

SECTION 2. DURATION OF THE AGREEMENT

- 2.1 **Effective Date** --This Agreement is effective upon the earlier of the date (1) LPA, or State on LPA's behalf, issued the Notice to Proceed, or (2) the Parties executed this Agreement.
- 2.2 **Renewal, Extension or Amendment** --The Agreement may be renewed, extended or amended by mutual agreement or as otherwise provided herein.
- 2.3 **Identifying Date** -- For convenience, the Agreement's identifying date will be the date LPA signed the agreement.
- 2.4 **Duration** -- LPA, or State on LPA's behalf, will treat the Agreement as completed or inactive upon the happening of either (1) the final completion of an audit review by State or its authorized representative and the resolution of all issues identified in the audit report, or (2) the waiver of an audit review.
- 2.5 **Termination** -- Further, LPA, or State on LPA's behalf, reserves the right to terminate the agreement as provided herein.

SECTION 3. TASK ORDER SCOPE OF SERVICES

- 3.1 Consultant agrees that the entire Scope of Services for this Task Order includes SECTION 5. SCOPE OF SERVICES of the Master Agreement, and the Scope of Services as set out in Exhibit "A", attached and incorporated herein by this reference. This Task Order Scope of Services will govern over any contrary language in the Scope of Services of the Master Agreement.
- 3.2 Upon receiving a written notice to proceed from LPA, or State on LPA's behalf, Consultant shall complete the Services required under this Task Order and in accordance with the terms of the Master Agreement.

SECTION 4. NOTICE TO PROCEED AND COMPLETION

- 4.1 LPA, or State on LPA's behalf, will issue Consultant a written Notice-to-Proceed upon 1) full execution of this Agreement, 2) State's determination on LPA's behalf, that federal funding approval has been obtained for the project and 3) State's concurrence that the form of this Agreement is acceptable for federal funding eligibility. Any Services performed by Consultant on the project prior to the date specified in the written Notice-to-Proceed will not eligible for reimbursement.
- 4.2 Consultant shall complete all the Services according to the schedule in attached Exhibit "A" and shall complete all Services required under this Task Order in a satisfactory manner by April 29, 2021. Any costs incurred after the completion date will not eligible for reimbursement unless LPA, or State on LPA's behalf, has provided a written extension of time.
- 4.3 The completion date will not be extended because of any avoidable delay attributed to Consultant, but delays attributable to LPA or State may constitute a basis for an extension of time.

SECTION 5. STAFFING PLAN (PE)

- 5.1 Consultant has provided LPA and State with a Staffing Plan, described in Exhibit "A", attached and incorporated herein by this reference. The Staffing Plan identifies the employees of Consultant who are anticipated to provide services under this Agreement. Consultant understands that LPA and State are relying on key personnel from Consultant's Staffing Plan to be primarily responsible for completing the Services under this Agreement. LPA and State consider the Principals, Senior level staff, Project Managers, Team Leaders or other similar classifications, to be the key personnel for the services provided. While providing Services under this Agreement, Consultant may make occasional temporary changes to the key personnel. However, any permanent change to key personnel will require prior written approval from LPA and State.
- 5.2 Personnel who are added to the Staffing Plan as replacements must be persons of comparable training and experience. Personnel added to the Staffing Plan as new personnel and not replacements must be qualified to perform the intended services. Failure on the part of Consultant to provide acceptable replacement personnel or qualified new personnel to keep the services on schedule will be cause for termination of this Task Order, with settlement to be made as provided in Exhibit "B" attached and incorporated herein by this reference.

SECTION 6. NEW EMPLOYEE WORK ELIGIBILITY STATUS

- 6.1 Consultant agrees to use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. Consultant hereby agrees to contractually require any subconsultants to use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee.
- 6.2 The undersigned duly authorized representative of Consultant, by signing this Agreement, hereby attests to the truth of the following certifications, and agrees as follows:
- Neb.Rev.Stat. § 4-114. I certify compliance with the provisions of Section 4-114 and, hereby certify that this Consultant shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. I agree to require all Subconsultants, by contractual agreement, to require the same registration and verification process.
- 6.3 If Consultant is an individual or sole proprietorship, the following applies:
- a. Consultant must complete the United States Citizenship Attestation form and attach it to this agreement. This form is available on the Department of Transportation website at <http://roads.nebraska.gov/media/2802/dr289.pdf>.
 - b. If Consultant indicates on such Attestation form that he or she is a qualified alien, Consultant agrees to provide the US Citizenship and Immigration Services documentation required to verify Consultant lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.
 - c. Consultant understands and agrees that lawful presence in the United States is required and Consultant may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. §4-108.

SECTION 7. FEES AND PAYMENTS

- 7.1 Consultant's fee proposal is attached as Exhibit "A", attached and incorporated herein by this reference.
- 7.2 The general provisions concerning payment under this Task Order are set out on Exhibit "B".
- 7.3 For performance of the services as described in this Task Order, Consultant will be paid a fixed-fee-for-profit of \$20,198.22 and up to a maximum amount of \$165,896.31 for actual costs in accordance with Exhibit "B". The total Task Order amount is \$186,094.53.

SECTION 8. SUSPENSION OR TERMINATION (Unique)

8.1 Suspension or Termination

LPA, or State on LPA's behalf, has the absolute and exclusive right to suspend the work, or terminate this Task Order at any time and for any reason and such action on its part will in no event be deemed a breach of this Task Order by LPA, or State on LPA's behalf. Without limiting the rights set out in this section, the following is a non-exclusive list of the examples of the circumstances under which this Task Order may be suspended or terminated:

- a. A loss, elimination, decrease, or re-allocation of funds that, in the sole discretion of LPA, or State on LPA's behalf, make it difficult, unlikely or impossible to have sufficient funding for the Services or the project;
- b. LPA, or State on LPA's behalf, abandons the Services or the project for any reason;
- c. Funding priorities of LPA, or State on LPA's behalf, have changed;
- d. LPA, or State on LPA's behalf, determines, in its sole discretion, that the interests of LPA, or State on LPA's behalf, are best protected by suspension or termination of this Task Order;
- e. Consultant fails to meet the schedule, milestones, or deadlines established in this Task Order or agreed to in writing by the Parties;
- f. Consultant fails to provide acceptable replacement personnel or qualified new personnel as determined by LPA, or State on LPA's behalf;
- g. Consultant has not made sufficient progress to assure that the Services are completed in accordance with the schedule in attached Exhibit "A" or in a timely manner;
- h. Consultant fails to meet the standard of care applicable to the Services;
- i. Consultant fails to meet the performance requirements of this Task Order;
- j. Consultant's breach of a provision of this Task Order or failure to meet a condition of this Task Order;
- k. Consultant's unlawful, dishonest, or fraudulent conduct in Consultant's professional capacity;
- l. Consultant fails to complete the project design in a form that is ready for letting a contract for construction according to the approved contract documents, including, but not limited to, project plans and specifications;

8.2 Suspension

- a. **Suspension for Convenience.** LPA, or State on LPA's behalf, may suspend for convenience by giving Consultant notice of the date of suspension, which date will be no fewer than three (3) business days after notice is given. Such notice will provide the reason(s) for such suspension. Consultant will not be compensated for any Services completed or costs incurred after the date of suspension. Consultant shall provide LPA, or State on LPA's behalf, a detailed summary of the current status of the Services completed and an invoice of all costs incurred up to and including the date of suspension.
- b. **Suspension for Cause.** If LPA, or State on LPA's behalf, suspends Consultant's work for cause or for issues related to performance, responsiveness or quality that must be corrected by Consultant, LPA, or State on LPA's behalf, will give

Consultant notice of the date of suspension, which date will be no fewer than three (3) business days after notice is given. LPA's notice of suspension, or State's notice of suspension on LPA's behalf, will provide Consultant with the reason(s) for the suspension, a timeframe for Consultant to correct the deficiencies, and when applicable, and a description of the actions that must be taken for LPA, or State on LPA's behalf, to rescind the suspension. Consultant's right to incur any additional costs will be suspended at the end of the day of suspension and will continue until all remedial action is completed to the satisfaction of LPA, or State on LPA's behalf. Failure to correct the deficiencies identified in a suspension will be grounds for termination of this Task Order.

8.3 Termination

If LPA, or State on LPA's behalf, terminates this Task Order, LPA, or State on LPA's behalf, shall give Consultant notice of the date of termination, which shall be no fewer than three (3) business days after notice is given. Notice of termination from LPA, or State on LPA's behalf, shall provide Consultant with a description of the reason(s) for the termination. Notice from LPA, or State on LPA's behalf, must specify when this Task Order will be terminated along with the requirements for completion of the work under this Task Order. Consultant's right to incur any additional costs shall cease at the end of the day of termination or as otherwise provided by LPA, or State on LPA's behalf.

8.4 Compensation upon suspension or termination

If LPA, or State on LPA's behalf, suspends the work or terminates this Task Order, Consultant must be compensated in accordance with the provisions set out in Exhibit "B", provided however, that in the case of suspension or termination for cause or for Consultant's breach of this Task Order, LPA, or State on LPA's behalf, will have the power to suspend payments, pending Consultant's compliance with the provisions of this Task Order. In the event of termination of this Task Order for cause, LPA, or State on LPA's behalf, may make the compensation adjustments set out in Exhibit "B".

SECTION 9. SECTIONS INCORPORATED BY REFERENCE

For the convenience of the parties, for consistency for funding review, and in an effort to reduce the length of this Task Order, the LPA and Consultant agree to be bound by and hereby incorporate by this reference as if fully set forth herein, Sections 11 through 13, and 15 through 28 of the Master Agreement for preliminary engineering, for LPA projects BK1741 between State and Consultant, dated July 12, 2017, with one recurring change:

The LPA and Consultant agree to meet the requirements of all incorporated provisions and represent that by signing this Task Order, they expressly certify to any required certifications contained in those provisions. Although some of the provisions of the Master Agreement are incorporated herein by reference, it is understood that the State is not a party to this Task Order and shall have no obligations or duties under this Task Order.

SECTION 10. CONSULTANT CERTIFICATIONS

- 10.1 The undersigned duly authorized representative of Consultant, by signing this Task Order, hereby reaffirms, under penalty of law, to the best of my knowledge and belief, the truth of the certifications set out in SECTION 29. CONSULTANT CERTIFICATIONS of the Master Agreement, with one change:

"LPA, or State on LPA's behalf" should be substituted in for any reference in that section of the Master Agreement to "State" unless the context would otherwise require.

- 10.2 Neb. Rev. Stat. § 81-1715(1). I certify compliance with the provisions of Section 81-1715 and, to the extent that this Task Order is a lump sum, specific rates of compensation, or actual cost-plus-a-fixed fee professional service agreement, I hereby certify that wage rates and other factual unit costs supporting the fees in this Task Order are accurate, complete, and current as of the date of this Task Order. I agree that this Task Order price and any additions thereto shall be adjusted to exclude any significant sums by which the LPA determines the agreement price had been increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs.

SECTION 11. LPA CERTIFICATION

- 11.1 By signing this Task Order, I do hereby certify that, to the best of my knowledge, Consultant or its representative has not been required, directly or indirectly as an express or implied condition in connection with obtaining or carrying out this Task Order to:
- (a) employ or retain, or agree to employ or retain, any firm or person, or
 - (b) pay or agree to pay to any firm, person, or organization, any fee, contribution, donation, or consideration of any kind.
- 11.2 I acknowledge that this certification is to be furnished to the FHWA, upon their request, in connection with this Task Order involving participation of Federal-Aid highway funds and is subject to applicable state and federal laws, both criminal and civil.

SECTION 12. ENTIRE AGREEMENT

The Master Agreement, all supplements thereto, and this Task Order constitute the entire agreement ("The Task Order ") between the Parties. The Task Order supersedes previous communications, representations, or other understandings, either oral or written; and all terms

and conditions of the Master Agreement and supplements thereto remain in full force and effect, and are incorporated herein.

IN WITNESS WHEREOF, the Parties hereby execute this Task Order pursuant to lawful authority as of the date signed by each party. Further, the Parties, by signing this Task Order Agreement, attest and affirm the truth of each and every certification and representation set out herein.

EXECUTED by Consultant this 17 day of February, 2018.

JEO CONSULTING GROUP, INC.
Robert Brigham



President

STATE OF NEBRASKA)
)ss.
LANCASTER COUNTY)

SUBSCRIBED AND SWORN to before me this 17th day of February, 2018.





Notary Public

EXECUTED by City of Lincoln this _____ day of _____, 2018.

CITY OF LINCOLN
Chris Beutler

Mayor

Subscribed and sworn to before me this _____ day of _____, 2018.

Clerk

STATE OF NEBRASKA
DEPARTMENT OF TRANSPORTATION
Form of Agreement Approved for
Federal Funding Eligibility:

Date

EXHIBIT "A"

Scope of Services

Project Name Beal Slough Trail - Lincoln

Project No. TAP-55(182)

CN: 13366

Engineering Design Services

A. PROJECT DESCRIPTION

The scope of services for this project involves engineering design services required to produce final construction plans and specifications for the following:

Project description:

The City of Lincoln would like to construct the Beal Slough trail extending east and south from 56th and London Rd. to 70th and Yankee Hill Rd. The trail will parallel the east side of the Beal Slough Channel between 56th and London Rd. and going southeasterly to 70th Street and Yankee Hill Rd. The trail will be on city owned property to Pine Lake Rd. It will connect with an underpass at Pine Lake Rd. where a section of trail will be completed as part of the Pine Lake Improvement project from the underpass to just east of the OPPD railroad tracks. (This project will be completed prior to construction of the trail). The trail will continue from that point south paralleling the railroad tracks and Beal Slough to just before 70th Street. The trail will connect with 70th street north of the current railroad crossing and then proceed south, crossing the railroad tracks and parallel 70th Street on the west side to Yankee Hill Rd. The Yankee Hill Rd. Trail is expected to be completed in fiscal year 2016-17. If the trail along Yankee Hill Rd. has not been completed by the time the Beal Slough Trail project has started, a trailhead will be constructed to accommodate 6-8 vehicles off of 70th Street.

This project will be 2.22 miles in length. It will be a ten feet wide 5 inch depth concrete. We will need to purchase ROW from the property owner immediately south of Pine Lake Road on the east side of the railroad tracks that will be approximately 20 feet wide and 1315 feet in length. The city currently has a permanent easement on this parcel for a sewer line which the trail will follow. There will also be the need to obtain ROW from a private property owner that will connect the trail from property the city owns with 70th Street. This ROW acquisition will need to be approximately 20 feet wide and 174 feet in length.

There will be some environmental issues since this trail will follow a greenway corridor that is located on mostly park property within a floodway/floodplain corridor. The trail will need to cross Beal Slough three times.

The project will include the following: survey, right-of-way survey, final bridge design, trail design, right-of-way design plans and estimates.

B. TASKS AND TASK ASSIGNMENTS

It is anticipated that the project will require the following major tasks

- 1) Environmental Documents and coordination (NEPA)
- 2) Project Management and Quality Control
- 3) Preliminary Field Survey
- 4) Trail Design (including Right-of-Way Design)
- 5) Hydrology and Hydraulic Design

- 6) Bridge Design.
- 7) Environmental Coordination
- 8) When NDOT is the Responsible Charge (RC) the National Pollutant Discharge Elimination System/ and the Storm Water Pollution Prevention Plan/SWPPP will be prepared by the NDOT's Roadside Stabilization Unit. The erosion control plans will be designed by the consultant. NDOT's Roadside Stabilization Unit will submit the Notice of Intent, NPDES permit and the SWPPP.
- 9) PS&E Submittals
- 10) Project Meetings (Kick off meeting, PIH meeting and Utility meeting)

C. APPLICABLE PUBLICATIONS

Overview: Work shall be done in accordance with the most current version of the following materials. The most current versions of the NDOT materials can be obtained from the NDOT Website.

- 1) LPA Guidelines Manual for Federal-Aid Projects. NDOT April 2009
- 2) A Policy on Geometric Design of Highways and Streets 2011 (AASHTO)
- 3) Federal Emergency Management Agency (F.E.M.A.) National Flood Insurance, Flood Boundary and Floodway Map, and Flood Insurance Study (FIS)
- 4) Manual on Uniform Traffic Control Devices (FHWA), 2009 Edition
- 5) MUTCD - Nebraska 2011 Supplement to the MUTCD
- 6) Nebraska Minimum Design Standards – Counties, Municipalities, State - 2010 (or most current) (Nebraska Administrative Code Title 428; Rules and Regulations of the Board of Public Roads Classifications and Standards
- 7) Nebraska State Plane Coordinate System Datum Adjustment Computations Lambert Conformal System Manual
- 8) Roadside Design Guide, 2011 (AASHTO)
- 9) Standard Specifications for Highway Construction 2007 (or latest edition) (NDOT)
- 10) NDOT Hydraulic Analysis Guidelines and Hydraulic Forms for Consultant
- 11) NDOT Roadway Design Manual & Drainage Design and Erosion Control Manual
- 12) Bridge Office Policies and Procedures Manual
- 13) Uniform Relocation Assistance and Real Property Acquisition Act (the Uniform Act)
- 14) The NDOT Right-of-Way Manual.
- 15) Evidencing Nebraska Land Titles (Nebraska Land Title Association),

The State/LPA Shall Provide:

D. PRELIMINARY ITEMS

- 1) As-built or design plans of the existing and adjacent roadways (if available).
- 2) Existing work already completed including traffic study, geotechnical report, and survey.
- 3) Any drainage studies completed in the area (if available).
- 4) Names of known utilities, addresses and permits listing use and occupancy permit data along the project.
- 5) Electronic files of current aerial photographs (if available).

- 6) Existing cadastral maps, plat maps, etc. electronic right-of-way files of the project area (if available).
- 7) Names of known utilities, addresses and permits listing use and occupancy permit data along the project.
- 8) Traffic count information. (NDOT)
- 9) Crash history for study corridor. (NDOT)
- 10) Detour route.
- 11) Section Corner Ties to corner monuments.
- 12) Existing benchmark information.
- 13) ROW negotiations and acquisitions.
- 14) Permit to occupy ROW

Format of Project Plans

- 1) The Consultant shall prepare plan and profile plan sheets on a scale of 1" = 100' (rural) or 1"=50' (urban) and "2L" (enlarged detail) sheets on a scale of 1" = 50' (rural) or 1" = 20' (urban).
- 2) All full-sized plan sheets must be approximately 24" x 36". The border sheet information is on NDOT's website (See Page 1). All half-size plan sheets must be on 11" x 17" paper.
- 3) Any materials submitted to the State by the Consultant must be on equivalent to white bond.
- 4) Any material which does not produce an acceptable reproduction will be returned to the Consultant for rectification.
- 5) The Consultants shall follow the State's CADD Drafting procedures and guidelines in preparing the project plans
 - a) Sheets must be set up according to the State's procedures.
 - b) File names must follow the State's CADD naming convention.
 - c) Line weights, line styles, text size and leveling must follow the State's guidelines.
- 6) The CADD files must also conform to the following standards and conventions:
 - a) Working units must be:
 - i. Master Units = Survey Feet (sf)
 - ii. Sub Units = inches (in)
 - iii. Resolution = 1000 per survey foot
 - iv. Accuracy = 0.1234
 - v. Working Area = 813.442402 miles
 - b) The Consultant s shall tie the project into the State Plane Coordinate System using NAD 1983 for horizontal control. Consultant shall coordinate with the Geodetic Survey office for the Project Datum Adjustment Factor (DAF).

Format of cross-sections

- 1) Plot all cross-sections. This includes labeling stations on the right side of the sheet, labeling existing and design centerline elevations at centerline and labeling offset distances every 5 or 10 feet at the bottom of each sheet.
- 2) Plot cross-sections on standard size sheets (same size as project plan sheets) according to the State's standards.
- 3) Stamp or plot in the upper right corner of each sheet the control number, horizontal and vertical scale. Plot the trail cross-sections at the scale of 1" = 10' H & V, or 1" = 20'H & V.

- 4) Plot cross-sections with stations progressing upward from the bottom to the top of the sheet.
- 5) Plot the cross-sections so that there is room for the improvement cross-section. Do not overlap cross-sections.
- 6) Cut cross-sections at 100 foot intervals (maximum) and at other locations as needed.
- 7) Plot a cross-section at each location when there may be a drainage structure needed and at driveways, intersections or other unusual features.
- 8) Plot drainage structure cross-sections and keep them separate from trail cross-sections.
- 9) Plot drainage structure cross sections at the following scales:
 - a) Storm Sewer 1" = 10' H & V.
 - b) Trail Culverts 1" = 10' H & V.
- 10) Plot computer trail cross-sections in the following manner:
 - a) Plot original ground with a dashed line.
 - b) Plot design template with a solid line.

Format of Right-of-Way plans

- 1) The Consultant shall submit all Right-of-Way plans as half-size plans plotted at the appropriate scale. They must measure the standard 11"x17" paper that is used in any normal Xerox machine.
- 2) The margins must measure as follows:
 - a) left margin must be approx. 1 inch
 - b) right margin must be approx. 5/16 inch
 - c) top and bottom margins must be approx. 3/8 inch.
- 3) The border used must be the one supplied with the ROW cell file. It measures approximately 15 5/8 inches x 10 3/8 inches when plotted at 1" = 200' scale.
- 4) The scale of the R.O.W. plan sheets will match the scale of the trail plan sheets.
- 5) Any materials submitted to the State by the Consultant must be on or equivalent to white bond.
- 6) Any material, which does not produce an acceptable reproduction, will be returned to the Consultant for rectification.
- 7) The Consultant shall follow the State's "CADD Drafting procedures and guidelines" in preparing the project plans.
- 8) Sheets must be set up according to the State's procedures.
- 9) File names must follow the State's CADD naming convention.
- 10) Line weights, line styles, text size and leveling must follow the State's guidelines.
- 11) The CADD files must conform to the following standards and conventions:
 - a) Graphic elements must be placed in accordance with the State MicroStation Right-of-Way element attributes standards.
 - b) Working units must be:
 1. Master Units = Ft
 2. Sub Units = 1000 TH
 3. Position Units = 1
- 12) File names must use State CADD naming convention.

Data Transfer

- 1) It shall be the Consultant's responsibility to obtain the necessary software to translate to and from the specified format for all electronic files supplied by the State and for all electronic files prepared by the Consultant and supplied to the LPA/State.
- 2) The State and the Consultant shall transfer all Graphic files in a 2D MicroStation V8 or SS4 format.
- 3) A data sheet must accompany all electronic file submittals listing the file names and detailing the method of placement so the State will know how to restore the data in our system.
- 4) All computer files shall be provided on compact disk (CD) unless otherwise specified

Consultant Shall Provide:

E. PROJECT MANAGEMENT AND QUALITY CONTROL

Coordination of Design Professional and Scheduling. The Consultant Project Manager will serve as point of contact, maintain project schedule and coordinate work of sub-Consultants

- 1) **Project Management.** This task includes activities to initiate and monitor project schedules, workload assignments and internal cost controls throughout the project. Also included are efforts to prepare and process invoices, prepare monthly progress reports and prepare project correspondence with the Client and NDOT and maintain project records.
- 2) **Project Description/ Purpose and Need:** The Consultant will develop the Project Description and Purpose and Need statements for the project. The Consultant shall work with the NEPA Consultant when updates or corrections as needed.
- 3) **Quality Assurance/Quality Control.** The Consultant will perform QA/QC checks at various stages of the project including prior to any official submittal. The Consultant will provide a copy of their QA/QC plan to the RC at the start of the project. The Consultant will submit in writing that this plan has been used during the project at each submittal with the name of the person responsible for performing the QA/QC the review.

F. SURVEY

- 1) **Preliminary Field Survey.** The topographic survey will be completed by the design consultant for the project corridor in accordance with current NDOT survey specifications.
 - a) **Survey Limits.** The design consultant will perform the necessary topographical ground survey including the existing centerline, intersecting streets, and drives, tying the location of land monuments to the existing centerline, cross-sections and profiles. A topographical survey will be performed using GPS and electronic "Total Station" technology in MicroStation format. Copies of field book records and electronic records will be submitted to the RC at the completion of final design. Natural topographic features and man-made features, will be recorded by coordinates to the nearest one-tenth (0.1) of a foot. All such topographic features, which are pertinent to the design or are necessary to properly show the effect of the proposed work upon the adjoining property and/or improvements, will be recorded. The topographical survey will not include an exact and detailed tree count. It will include locations of all trees over 80" in circumference (approx. 12" in diameter) and locations of all trees within 20 feet of the conceptually proposed alignment. The consultant will complete

a site visit after LOC's noting the size, type and location of trees to be removed.
Station and offset will be noted on the plans for trees to be removed. The limits of the survey are to be at least 40 feet on each side of the conceptually proposed centerline or to corners of structures on tracts, and must include enough information to build the proposed typical cross-section and show the limits of construction. The survey limits will extend 200 feet before the start of the project and 200 feet beyond the end of the topographic features a minimum of 40 feet either side of the conceptually proposed centerline. The topographic survey will extend along intersecting streets a minimum distance of 300 feet from roadway centerline and will be a minimum of 50 feet from either side of roadway centerline. Channel meanders will be identified and surveyed along their flowlines and top of banks for 300 feet from centerline.

- 2) **Digital Terrain Model.** A Digital Terrain Model will be provided for use in cross-section creation. Natural topographic features and man-made features above ground (including existing adjacent building limits) will be recorded. All above and below ground utilities will be located once Digger's Hotline marks them. Sanitary and storm sewer manholes will have rim and flow line elevations surveyed.
- 3) **Base Map Preparation.** Consultant will create the base maps using the topographic survey data.
- 4) **Horizontal and Vertical Control.** The design consultant will establish control points along the project corridor at regular intervals and provide control "reference" point ties to topographic features of permanent nature.
 - a) Horizontal control points will be established and referenced to existing section corners. The control points will be permanent in nature and tied to Nebraska State Plane Coordinate system.
 - b) Vertical control points will be established and referenced to USGS NAVD88 datum. There will be a minimum of three permanent benchmarks established with additional temporary benchmarks set along the project corridor at intervals not to exceed 500 feet.
- 5) **Section/Property Corners.** The consultant will locate necessary section corners, quarter-section and property corners for use in drafting existing right-of-way and property lines. The Consultant will work with the County Surveyor on any corners not found to be set by the County Surveyor.
- 6) **Existing Utilities.** The consultant will call in a One-Call utility locate ticket. Utilities will be shown based on visible, above ground, evident in the field and utility locator's markings. The project liaison will assist in providing utility locations and contact information.
- 7) **Note Reduction/Preliminary Plotting.** This task will include the effort for gathering data to create the existing topography file to use for preliminary design. Placing station offsets for all topographic items.

G. TRAIL DESIGN

Overview. The following task will be used to accomplish Trail Design and in the development of design plans. This task includes trail design services during the Plan-in-Hand phase. Design shall be done in conformance to AASHTO Trail Design Guidelines, latest version.

- 1) **Complete Form DR-76.** Roadway (Trail) Design – Principal Controlling Design Criteria.
After Form DR-76 has been completed send a copy to NDOT LPS and request any design exceptions or relaxations that may be needed.
- 2) **Data Collection and Review.** For gathering, reviewing and organizing data for the project.
Determining design criteria will also be included with this task.
- 3) **Trail Horizontal Alignment.** This task includes the design and drafting of the horizontal alignment(s) and/or adjustment of horizontal alignment(s). Task includes creation of the Control Point/PI/Curve Data 2-H sheet(s); the Consultant will create 2-H Horizontal Alignment and Orientation on any design alignments.
- 4) **Trail Vertical Alignment.** This task includes the design and drafting of the vertical alignment(s) and/or adjustment of vertical alignment(s).
- 5) **Template Trail Cross Sections.** Develop the design templates necessary to template the cross sections, including design of special ditches.
- 6) **Limits of Construction.** This task includes efforts to create LOCs for the project.
- 7) **Earthwork.** Determine earthwork balance factor. Process the earthwork for each alignment, including any extra earthwork due to large driveways, guardrail and any other cause for earthwork. Calculate earthwork quantities and produce earthwork summary and plan notes
- 8) **Trail Geometric Design.** This task includes the geometric design of all Trail alignments, intersections, driveways, etc. which includes setting up all the geometric sheets for the project and labeling.
- 9) **Trail and Driveway Culverts.** This task is for trail and driveway culverts and includes the preparation of a drainage map outlining all drainage areas and completion of the following for each area. NDOT's Pipe Policy will be followed.
 - a) Compute area size and Q.
 - b) Determine allowable H.W.
 - c) Size culvert and compute H.W.
 - d) Using design cross sections, determine length of culvert.
 - e) For each culvert, show the Station, D.A., Q., H.W., Size and Length.
 - f) Determine location of new/existing culverts with special ditch locations
 - g) Draft culvert build notes
- 10) **Construction and Removal.** Development of Construction and Removal notes detailing construction and removal items not specifically identified elsewhere in this scope. NDOT CAD standards and construction/removal notes/tabs will be utilized.
- 11) **Limits of Construction.** The Consultant will define and draft the limits of construction on the plan sheets. These limits will be used to determine environmental impacts and right-of-way requirements.
- 12) **Utility Coordination/Verification.** The Consultant will draft utilities on the plans that weren't included in the preliminary plotting and for limited coordination with the utilities, to verify the location and type of utility. In addition, the Consultant will coordinate and schedule a Utilities meeting to identify and work through potential conflicts identified in the preliminary 30% Plan-In-Hand plans and prepare NDOT Standard Utility contracts and pole tab sheets. (LPA is responsible to coordinate utility agreement negotiations with utilities).
- 13) **Construction Phasing/Detour Route/Temporary Roads.** The Consultant shall develop traffic phasing concepts to allow for reasonable access during construction for highway and local traffic that may include detours and staging of

~~construction. The Consultant shall prepare a written description of the Construction Phasing, noting detour routes if applicable. This phasing plan shall be submitted at the time of the first submittal.~~

- 14) **Erosion Control.** This task includes effort required to design and draft erosion control measures for the project. The consultant will submit the erosion control plans to the NDOT Roadside Stabilization Unit for review and concurrence.
- 15) **Quantities/Estimates.** Develop and tabulate all of the preliminary quantities. Computation sheets will be submitted with all Quantities to the Client for all submittals; including Pre/Post Plan-in-Hand and Final Plans, using NDOT standard bid items and NDOT quantities forms (DR 342 and DR 343). In additions to these submittals, estimates will be updated and submitted yearly throughout the preliminary engineering and final design phases. Estimates of probable cost will be prepared by the Consultant using recent bid tabulations and other available information. If there is railroad involvement and it is determined that a theoretical estimate is needed, this task will be added as a supplement.
- 16) **Typical Sections.** This includes design and drafting the typical cross sections and other typical sections as needed for the project.
- 17) **2W/2A Sheets.** This task includes developing the aerial plan sheets from existing GIS information. This task will include effort to illustrate wetlands, restricted areas, channels, alignments, impacted areas, reference files, and other wetland features. Sheet based on GIS information provided by the environmental consultant.
- 18) ~~**Guardrail.** This task includes effort to analyze potential guardrail locations and design new guardrail at locations that do not meet current standards or are affected by other elements of the project. Guardrail will be designed to meet current NDOT standards unless justified by an accepted design as governed by the current Roadside Design Guide.~~
- 19) **Floodplain Permitting Identification.** This task includes the following:
 - a) Determine if the project will have construction occurring in a floodplain, whether crossing or parallel:
 - b) The Consultant determines if the project crosses or occurs within a mapped floodplain, or in the case of parallel floodplains determines and quantifies the highway embankment work that will encroach into the area mapped as a floodplain.
- 20) **Plan-in-Hand Meeting/Report.** Schedule and attend a plan-in-hand meeting with the key stakeholders to review the thirty (30) percent trail design plans. The Consultant will prepare and submit a draft Plan-in-Hand report within two (2) weeks of the meeting summarizing the findings and decisions made regarding the project design. The draft PIH report will be submitted and routed for review and comments. The consultant will address the comments (within 2 weeks) and submit the final PIH report.
- 21) **Working Day Calculations.** Working Days for construction activities will be calculated at the (30) percent plan stage and incorporated into the draft PIH report and updated at the (90) percent plan stage.
- 22) **Pavement Determination.** The Consultant shall provide complete documentation of the structural pavement design analysis used for the project. The pavement analysis must be a nationally recognized method, such as AASHTO, AIM, PCA, etc. The Pavement Determination Data Sheet (supplied by NDOT) shall be completed by the Consultant and included as part of the documentation.

23) **Retaining Wall Design.** The Consultant shall investigate various retaining wall designs and recommend a wall type. Example retaining wall options include modular block walls, "stone-strong" walls, and cast-in-place walls. The Consultant shall prepare retaining wall profiles for each wall along the project. This scope of services assumes all retaining walls are modular block walls and the Consultant is responsible for all design and details associated with the modular block walls.

H. DESIGN PLAN PREPARATION AND ASSEMBLY

Overview. These tasks are to develop design plans and assembly of design plans of items not shown in the Trail Design section. Items to be included, but not limited to, can be found in the NDOT Roadway Design Manual under Highway Plans Assembly. These are the plans which will be let to contract, therefore, plans should be thoroughly checked for completeness, accuracy, and formatting by the design technician, the trail designer and other contributing parties.

Drafting Procedures. Consultant will follow the State's CADD drafting procedures and guidelines in preparing plans. File names must follow the State's CADD naming convention. Line weights, line styles, text size and leveling must follow the State's guidelines.

1) **Plan Sheets.** The consultant will refer to NDOT Roadway Design Manual for a complete list of plans sheets to be included in the plan set. Special plans will be developed by the Consultant. Standard plans are not included with the plan set, but a current up to date list of Standard Plans used for the project will be included to be placed on the Title Sheet. Below is a list of plans to be included, but not limited to, in the Plan-In-Hand plan set:

- a) Title Sheet
- b) Typical Section Sheet
- c) 2A – Aerial Sheet
- d) 2H – Centerline Control
- e) ~~2P – Preliminary Phasing~~
- f) 2L – Construction / Geometrics
- g) 2L – Removal Plans
- h) 2L – Storm Sewer/Culvert
- i) P & P sheets
- j) Special Plans – Retaining Wall P & P Sheets
- k) Cross Sections
- l) Right-of-Way Ownership Plans

I. ~~WATERLINE/SANITARY SEWER RELOCATION/RECONSTRUCTION~~

Overview: ~~The Consultant shall identify existing water mains or sanitary sewers that are in conflict with project improvements. Project improvements are to be designed around existing water mains and sanitary sewer lines; however, in some situations relocating the water main or sanitary line will produce an improved engineering design. Engineering judgment shall be used to determine when to relocate a public utility. This task involves minor reconstruction or relocation involving a public utility due to a trail improvement and not a project initiated by the utility. Sometimes it is beneficial for municipalities (LPAs) to upgrade existing facilities concurrently with a transportation construction project. Federal aid Highway Transportation funds may not be used for betterments to water or wastewater systems. Only portions of the~~

system directly impacted by improvements to the trail may receive Federal aid Highway Transportation funds. The pay items for improvements to the water and waste water systems will need to be separated out from the pay items for which Federal participation is allowed.

1) ~~**Wastewater Reconstruction Plan Sheets.**~~ The design of the wastewater collection system shall comply with the requirements of the Federal and State Clean Water Acts. Design and construction of facilities for the City's the design of the system shall generally follow the Recommended Standards for Sewage Works, a Report of the Committee of the Great Lakes Upper Mississippi River Board of State Public Health and Environmental Managers (10 State Standards). Details of construction shall conform to the LPA's Standard Specifications for Municipal Construction and Standard Plans if applicable. All plans for construction of wastewater system improvements shall be reviewed and approved by the LPA's Public Works and Utilities Department and the State of Nebraska Department of Environmental Quality prior to construction.

- ~~Horizontal Alignment~~
- ~~Vertical Alignment~~
- ~~Detail Drawings~~
- ~~Utility Conflict Verification and Resolution~~

2) ~~**Water Main Reconstruction.**~~ Plan Sheets (SP). The design of water mains, water distribution systems, valves, backflow preventers, fire hydrants, etc. shall comply with the Federal and State Safe Drinking Water Acts. The design of the system shall generally follow the standards of the American Water Works Association (AWWA) and the Recommended Standards for Water Works, a Report of the Committee of the Great Lakes Upper Mississippi River Board of State Public Health and Environmental Managers (10 State Standards). The design and construction of the improvement shall comply with LPA's Standard Specifications for Construction and Standard Plans if applicable. Fire flow requirements shall generally follow those in the Fire Suppression Rating Schedule published by the Insurance Services Office. All plans for the construction of water system improvements shall be reviewed and approved by the LPA's Public Works and Utilities Department, the Local Fire Department and if applicable the State of Nebraska Department of Health and Human Services, prior to construction. The Nebraska Safe Drinking Water Act and regulations require plans and specifications for all major construction related to public water systems be prepared by a registered professional engineer and be approved by the Department of Health and Human Services before construction costs are committed by the system owner. The law defines major construction as structural changes that affect the source of supply, treatment processes, or transmission of water to service areas, but it does not include the extension of service mains within an established service area.

- ~~Horizontal Alignment~~
- ~~Vertical Alignment~~
- ~~Detail Drawings~~
- ~~Utility Conflict Verification and Resolution~~

J. UTILITIES

1) **Assistance.** This includes effort to assist the LPA with engaging the existing utility owners.

- 2) **Coordination of Plan Review.** The Consultant will request that the utility companies return marked-up plans with utility verification and will incorporate the information into the topography. All utilities identified in the topographic survey and verified by the individual utility will be incorporated into the plans.
- 3) **Meetings with Utilities.** Two (2) utility review meetings will be scheduled. Effort is also included for coordination via the phone and up to three (3) total one-on-one meetings with affected utilities.

K. RIGHT-OF-WAY DESIGN

Overview: The following tasks will be completed to establish the existing Right-of-Way and to design the proposed Right-of-Way. The consultant will complete and submit title research, legal description and ROW plans.

Qualifications, Knowledge and Experience. The Services must be completed by, or under the direct supervision of a registered abstractor who is qualified and in good standing to complete the Services in Nebraska. Consultant must be knowledgeable and have substantial experience completing Services of this type.

Software, Equipment, and Submission Requirements. Title researcher will be responsible for providing all necessary equipment, supplies, materials and software to complete the Services. The Certificate of Title reports shall be signed, converted to pdf format and submitted in readable electronic form. Supporting documents shall be submitted in pdf, jpeg or tiff format. All deliverables shall be submitted using the specified file naming convention.

- 1) **Existing Right-of-Way Base.** This task involves certified title research including: collecting the Plat drawings, reviewing property titles, reviewing survey data, and other necessary information to establish the existing Right-of-Way, including easements, for the properties abutting the project. Title Searches to be completed by a certified abstractor. Ownership plans will be developed from this information and the consultant will have this task completed prior to the plan-in-hand meeting.
- 2) **Proposed Right-of-Way.** The Consultant will determine the easements (temporary and permanent) and right-of-way required to construct the project. It is estimated that there will be up to 6 tracts associated with this project.
- 3) **Right-of-Way Plan Sheets.** The Consultant will prepare right-of-way plan sheets to include in the plan set. The sheets will include existing property lines and all proposed right-of-way ownerships, easements and takings will be tabulated and shown on the sheets. Tract Maps with all legal description will be provided by the Consultant.
- 4) **Title Research.** All title research services will be completed in compliance with the Uniform Relocation Assistance and Real Property Acquisition Act (the Uniform Act) and with the NDOT Right-of-Way Manual.
- 5) **PIH Staking.** For the PIH field visit the Consultant will delineate the existing ROW with lath and stakes with flagging, assume 4 tract (s).
- 6) **Negotiation Staking.** During the negotiations of the Consultant will stake the right of way taking with lath and stakes with flagging, assume 4 tract (s).
- 7) **Deliverables.**
 - a) The title researcher shall review the title research study area ("Study Area") and search the County real estate records to identify each separate parcel of land located within the Study Area. A separate parcel of land is all contiguous land owned by the

- same owner, and held in the same title (e.g. sole owner, joint tenants, tenants in common, etc.).
- b) The title researcher shall provide a copy of the title-vesting document for the current owner of each parcel of land in the Study Area.
 - c) The title researcher shall list all owners of record of the parcel within the preceding 5-years, and include a copy of each additional instrument conveying title to each owner identified.
 - d) Title researcher shall provide a Certificate of Title Report for each parcel within the study area. This Title Report shall be on the State's approved Certificate of Title Report form (or a preapproved form) to report such information. Each Title Report shall also include the following information:
 - i) The name of the current parcel owner(s) and how the title is held.
 - ii) The owner's mailing address as shown in the County Assessor or Treasurer's records.
 - iii) If the owner of record is known to be deceased, the Case Number of the Deceased's Probate along with the name(s) of court appointed Personal Representative(s) if available.
 - iv) Active Mortgages, Deeds of Trusts, and other financing documents, and any assignments of such documents.
 - v) Active liens, agreements, conditions, limitations, restrictions or covenants affecting title.
 - vi) Easements such as private water, sewer, ingress/egress (access), cell towers, flood, and irrigation or others that encumber or restrict the use of the land. Consultant should not provide easements for public utilities (water, sanitary sewer, power, gas, cable, telephone and telegraph).
 - vii) All recorded leases except oil and gas leases.
 - viii) List the document recording information for each record listed in the title report to include the date of record and instrument number.
 - ix) The legal description for the subject parcel of land.
 - x) Comments the abstractor believes are necessary for a full understanding of the information reviewed for the parcel.
 - xi) Name, signature, and license number of abstractor and title effective date.
 - e) Provide copies of all supporting documentation (deeds, easements, etc.) that are listed in the title report in an electronic format type using the document naming convention as specified. Consultant should not provide copies of the active mortgages, deeds of trust or assignments that are listed on the Title Report.
 - f) If applicable, Consultant shall provide copies of subdivision plats and surveys of irregular tracts and tax lots with metes and bounds field notes.
 - g) Provide copies of deeds, easements, dedications, plats, etc., for any property acquired by or conveyed to governmental entities.
 - h) Provide copies of County Cadastral Maps in counties that do not have a GIS website.

Report and Document Naming Convention, Each Title Report and each supporting document needs to be a separate .pdf file using the following naming conventions.

- i) Title Reports
 - 01) When subject land is a Rural Parcel identify as.
 - 02) Example: 4-6-9E NW4 part (Owner last name).pdf.
 - 03) Example: 4-6-9E SW4 (Owner last name).pdf
 - 04) When subject land is a subdivided Parcel identify as
 - 05) Example: Jones Sub B3 L1-3 (Owner last name).pdf
 - 06) Example: Jones Sub B3 L1-3 part (Owner last name).pdf
 - 07) When subject land is Tax Lots (sometimes known as Irregular Tract) identify as
 - 08) Example: 4-6-9E IT 135 (Owner last name).pdf
 - 09) Example: 4-6-9E TL 135 (Owner last name).pdf
- ii) All recorded documents
 - 01) Example for Book-Page: 35-137.pdf
 - 02) Example for Instrument: 2014-00125.pdf
 - 03) Example when document has both: 35-137 (2014-00125).pdf
- iii) Subdivision Plats
 - 01) Example: Jones Subdivision - Jones Sub.pdf
 - 02) Example: Jones Third Replat – Jones Third.pdf
- iv) Surveys if no recording information, use Section –Township-Range
 - 01) Example: 4-6-9E.pdf

L. BRIDGE DESIGN SERVICES

Overview. The Consultant shall prepare bridge plans as per the NDOT Bridge Office Policy and Procedures Manual. The scope of work on this project is for design of a single-span, prefabricated, preengineered, steel truss pedestrian bridge. The superstructure will be designed by the supplier. If another type of bridge will be required, a supplemental agreement for design shall be prepared. Concrete approach slabs will NOT be used on this project.

- 1) **Project Plans Format, Conventional and CADD.** All full-sized plan sheets must be 24" x 36". The margin on the right will be 1/2", the margin on the top and bottom will be 1" and the margin on the left side (binding edge) will measure 2". The border will measure 22" x 33 1/2". Any materials submitted to the State by the Consultant must be on or equivalent to white bond. Any material, which does not produce an acceptable reproduction, will be returned to the Consultant for rectification. The CADD files must also conform to the following standards conventions:
- 2) Graphic elements must be placed according to DOR-Bridge level conventions as described in the README DGN file.
 - a) Working units must be:
 - i) Master Units = Survey Feet, Label: '
 - ii) Sub Units = inches, Label: "
 - iii) Resolution = 1000 per distance survey foot
 - iv) File names must use DOR-Bridge CADD naming convention as described in the Bridge Office Policies and Procedures Manual.

- 3) **Hydraulic Survey.** The Consultant shall accomplish the hydraulic survey based on the "2012 Hydraulic Analysis Guidelines" (or latest edition). The Consultant shall perform the hydraulic survey at the new pedestrian bridge over Beal Slough.
- 4) **Hydraulic Analysis.** The Consultant shall accomplish the Hydraulic Analysis based on the "2012 NDOT Hydraulic Analysis Guidelines" (or latest edition). The Consultant shall perform the hydraulic analyses at the new pedestrian bridge location over Beal Slough. When responding to comments, the Consultant shall e-mail the itemized response to NDOT. Analysis will take into consideration the ultimate need to meet a no rise condition, as the project is in or adjacent to flood way for Beal Slough.
- 5) **Bridge Design Data Sheets and Bridge Type, Size and Location Plans (TS&L) for Hydraulic Structure**
 - a) The Consultant shall prepare a Bridge Design Data Sheet and Type, Size, and Location plan (TS&L) for the new pedestrian bridge over Beal Slough.
 - ~~b) The Consultant shall prepare Nebraska Department of Roads form DR67 requesting that NDOT's Bridge Division design the Triple _____' x _____' x _____' Concrete Box Culvert C_____.~~
 - c) The Consultant shall prepare a general description/layout of the proposed bridge on the TS&L plan. This information shall include, but is not necessarily limited to the following:
 - i) ~~Sectional Elevation View of bridge and concrete box culvert.~~
 - 01) Span arrangement
 - 02) Locations of substructure elements
 - 03) Existing and/or design profiles of ground, trails, railroads, etc. below and adjacent to bridge ~~and concrete box culvert.~~ (Where applicable).
 - 04) Low girder/slab elevations
 - 05) Grade elevations of bridge and other critical elevations
 - ~~06) Top of pier footing elevations~~
 - 07) Bottom of sheet pile or abutment wall elevation
 - ~~08) Bottom of pile bent encasement elevation~~
 - 09) H.W. Elevation (Q100)
 - ii) ~~General Plan View of Bridge and concrete box culvert.~~
 - 01) Span arrangement
 - 02) Locations of substructure elements
 - 03) Location of existing bridge and existing culverts.
 - 04) Locations of existing roadway/railroads
 - 05) Horizontal clearances to substructure elements
 - iii) ~~Typical Cross Section of Bridge Roadway/Superstructure and concrete box culvert.~~
 - 01) Girder type designation
 - 02) Girder spacing
 - 03) Clear trail width of bridge
 - ~~04) Pier elevation view~~
 - ~~05) Phasing (if any)~~
 - iv) Show all hydraulic information required for preliminary data sheets, including critical berm elevation and scour values, as shown in the hydraulic analysis

guidelines. In addition, show elevation and plan view of riprap layout, channel shaping and channel transition back to the natural channel, to scale. Show ordinary high water (OHW) elevation and riprap limits and quantity thereof within the ordinary high water limits.

- 01) Existing profiles
- 02) New grade profile sketch
- 03) Structure location note
- 04) The title block along the right side of the sheet shall include the information specified in Section 2.1.3 of the Bridge Office Policies and Procedures Manual.

- v) The Bridge Design Data Sheet shall be done in accordance with the Bridge Office Policies and Procedures Manual. The Consultant retains electronic TS&L plot data for reproduction if necessary.

6) Final Bridge Design and Development of Bridge Plans

- a) **Final Bridge Design.** The Consultant shall complete calculations and design to prepare final bridge and ~~concrete box culvert~~ design plans for the bridge substructure (superstructure to be designed by bridge supplier) for the structure(s) as described in Section (A) of this Scope of Services and as detailed in the bridge design data sheets approved by the State. Because the bridges in this Scope of Services are different types, some of the items in this section and the following section may not apply for each structure. The calculations and design plans shall follow methods as described in the Nebraska Department of Transportation Bridge Office Policies and Procedures.
- b) The Consultant shall compute quantities according to the standard bid items in the Standard Specifications.
- c) The Consultant shall prepare a list of all current standard special provisions that pertain to this project. In addition, the Consultant shall prepare special provisions for any bid item not in accordance with the Standard Specifications.
- d) ~~Front Sheet:~~ This task includes efforts to create the front sheet of the bridge plans.
- e) **General Notes, Quantities and Index:** This task includes efforts in assembling general notes, quantities and index.
- f) **General Plan & Elevation Plan:** This task includes efforts to create the general plan and elevation plan.
- g) ~~Bridge Coordinate Plan:~~ This task includes efforts to create the coordinate plan.
- h) **Geology Plan and Elevation Plan:** This includes efforts to create the geology plan and elevation plan.
- i) **Foundation/Pile Layout Plan:** This task includes efforts to create the foundation/Pile layout plan.
- j) **Abutment Plan:** This includes efforts to create the abutment plan.
- k) ~~Pier/Bent Plan:~~ This includes efforts to create the pier/bent plan.
- l) ~~Beam Framing Plan:~~ This includes efforts to create the beam framing plan.
- m) ~~Beam/Girder Details:~~ This includes efforts to create the beam/girder plan.
- n) **Typical Section/Trail Cross Section:** This includes efforts to create the typical section/trail cross section.
- o) ~~Bearing Plan:~~ This includes efforts to create the bearing plan.

- ~~p) **Slab Reinforcement Plan:** This includes efforts to create the slab reinforcement plan.~~
 - ~~q) **Approach Slabs:** This includes efforts to create the approach slab plan. (Need for plan as determined by NDOT)~~
 - ~~r) **Concrete Rail/Barrier Sheet:** This includes efforts to create the concrete rail/barrier plan.~~
 - s) **Bill of Bar Sheet with Bending Diagrams (Other Bill of Bars shall be included with Abutment, Pier/Bent and Slab Plans):** This includes efforts to create the bill of bars plan with bending diagrams.
 - ~~t) **Load Rating:** This effort involves calculations and documentation required to load rate the structure/structures per acceptance by NDOT Bridge Division.~~
- 7) **90% Bridge Plan Submittal.** The Consultant shall submit to the State four sets of progress prints for the 90% review when the initial design for the bridge substructure (superstructure to be designed by bridge supplier) and detailing is completed, but prior to the checking. In addition, if there are utilities that will be incorporated into the structure(s), the Consultant shall submit to the State an additional three sets of prints for those sheets showing the work required for the utilities. A draft copy of the special provisions shall also be submitted. The consultant shall complete and provide the bridge load rating form DR-33.
- 1) **Final Bridge Plan Submittal.** The Consultant shall submit final drawings and final special provisions when all final corrections and quantity calculations are completed. The consultant shall submit one complete set of design calculations and one complete set of check calculations, including copies of any computer output used in the design and check calculations for the bridge substructure (superstructure to be designed by bridge supplier). Also to be submitted is one complete set of quantity calculations and one complete set of quantity check calculations (including copies of any applicable computer output) for the bridge substructure (superstructure to be designed by bridge supplier). All design/check calculations and all quantity/check calculations shall be submitted on a CD ROM or DVD disk.
- i. The Consultant shall do the design check calculations and check quantity calculations independent from the original design calculations and original quantity calculations. All check calculations are to be performed by a person of equal professional status as the one who performed the original calculations.
 - ii. The Consultant shall show the names of the individuals preparing and checking the work, along with the date on each sheet of the original design, design check calculations, and quantity calculations and check quantity calculations. The Consultant shall make sure that all calculations are properly indexed, arranged in a logical and orderly manner.
 - iii. ~~The Consultant shall provide shim data (deflections due to slab and curb/rail weight).~~ If any proprietary items are specified in the final design plans, the Consultant shall list at least three manufacturers in the plans and special provisions, or a general specification eliminating any reference to proprietary names. In addition, the Consultant shall provide to the State any technical brochures pertaining to the proposed products.

- 8) **Requirements for Bridge Design Plans.** The Consultant shall prepare final bridge design plans for the bridge substructure (superstructure to be designed by bridge supplier) on sheets in accordance with the format described in Section D of this Scope of Services. The Consultant shall provide a title block along the right side of each sheet that is in conformance with the "Bridge Office Policies and Procedures Manual". The Consultant shall draft all structural details at a scale, which will clearly show all details, notes and lettering when the plans are reduced to half size. The Consultant shall put the seal and signature of a registered professional engineer licensed to practice in the State of Nebraska on all sheets of the final design plans.

M. ENVIRONMENTAL COORDINATION

- 1) **Review of NEPA documents and commitments.** The Consultant shall review the NEPA Document for any commitments made that must be addressed during final design.
- 2) **NEPA exhibits.** The Consultant will provide the Environmental Consultant with exhibits as needed for the development of Public Involvement.
- 3) **Preliminary Waterway Permit Data Sheet.** The consultant will complete form DR-290 for the project.
- 4) **Wetlands Impacts.** The Design Consultant will provide limits of construction to the Environmental consultant for calculation of impacts to wetland areas delineated. This information shall be provided in the final plans on the 2-W Sheet.
- 5) **Permits.** The Consultant shall prepare and submit on behalf of the LPA the following permits, agreements, certifications, and forms. The Consultant shall copy the RC (NDOT) on all applications being submitted.
 - a) Floodplain Permit (Design Consultant) – will be a no rise as the project is in or adjacent to flood way for Beal Slough.
 - b) Army Corps of Engineers 404 permit (NEPA Consultant)
 - c) National Pollution Discharge Elimination System, Storm-water Pollution Prevention Plan & Notice of Intent (NPDES, SWPPP & NOI) (Design Consultant)
 - d) Activity Checklists (NEPA Consultant)
 - e) NEPA Coordination (Assume NEPA Consultant/NDOT will provide Green Sheets)
 - f) Wetland Impact calculations form DR290 Waterway Permit Data Sheet (To be calculated by Design Consultant)
 - g) Scope of project identification (NEPA Consultant)
 - h) Public involvement postal outreach (NEPA Consultant)

N. PS&E SUBMITTAL

- 1) **Draft PS&E Submittal.** The Consultant shall submit a draft PS&E package, along with all project checklists, to the Project Liaison and NDOT Project Coordinator for final review. The package will include the plan set, special provisions, and total project quantities. The Consultant shall prepare an updated total estimate of quantities and project cost estimate.
- 2) **Final PS&E Submittal.** Upon incorporating review comments into the plan set and special provisions, the Consultant shall prepare and submit all drawings, special provisions, and an estimate of quantities to the NDOT Project Coordinator for the final PS&E review. The bid package includes horse blankets, summary of quantity sheets (DR 342 and DR 343) sealed drawings and special provisions.

- 3) **Special Provisions.** The Consultant shall draft any special provisions necessary for the contract documents including a prosecution and progress; status of right-of-way; and status of utilities.
- 4) **Bid Justification.** Detailed justification of accepting bid prices may be requested if the bid prices are substantially higher or lower than the engineer's project cost estimate.

O. PROJECT MEETINGS

- 1) **Plan-In-Hand Meeting/Report.** The Consultant will schedule and attend a plan-in-hand meeting to review the thirty (30) percent trail design plans. Consultant to prepare plan-in-hand report. (On-site)
- 2) **Owner Meetings.** Consultant will meet with City Representatives, one (1) kick off meeting, one(1) review preliminary meeting, three (3) progress review meeting(s) and one(1) final drawing meeting(s).

P. DELIVERABLES

Note: Refer to Bridge Design Services (Section 4) for more information on bridge submittals.

- 1) **Preliminary Trail Design**
 - a) Monthly Invoices and Progress Reports
 - b) Meeting Minutes for all meetings to be summarized and delivered/mailed to the Client, NDOT and applicable stakeholders within (2) days of meetings.
 - c) Hydraulic Report and Data Sheet
 - d) Deliverables for the Plan-in-Hand Phase include:
 - i) Preliminary Waterway Permit Data Sheet, DR Form 290
 - ii) Erosion Control Plan-in-Hand Checklist, Exhibit G of the NDOT Roadway Design Process Outline(DPO), if applicable
 - iii) FAA Form 7460-1 when applicable
 - iv) Railroad Project Information Sheet, DR Form 95, if applicable
 - v) Two half-size set Plan-in-Hand Plans and corresponding electronic files
 - vi) Project Information Sheet, DR Form 342
 - vii) Project Quantity Sheet, DR Form 343E
 - viii) Draft Plan-in-Hand Report (pdf format and paper copy)
 - ix) Plan-in-Hand plans with comments consolidated on one set
 - e) Final Plan-in-Hand Report (pdf format and paper copy)
 - f) Plans/display showing project in relation to mapped floodplains/floodways, if applicable
 - g) Opinion of Probable Construction Cost
 - h) Construction and working day estimates
- 2) **Final Trail Design**
 - a) Certification of Compliance, DR Form
 - b) Final plans (one half-size set) and corresponding electronic files
 - c) Floodplain certification and documentation
 - d) Floodplain Certification Memo
 - e) Project Quantity Sheet, DR Form
 - f) Construction and working day estimates

Q. DELIVERABLES FOR FINAL PLANS (PS&E) PHASE INCLUDE

- 1) Revised Waterway Permit Data Sheet, DR Form 290
- 2) Floodplain Certification and documentation
- 3) Floodplain Certification Memo
- 4) ~~Concrete Box Culvert Request Sheet, DR Form 67~~
- 5) Opinion of Probable Construction Cost
 - Two half-size set and one full-size set of Final Plans and corresponding electronic files (stamped and signed and preliminary stamp removed). Plans sets shall have the following applicable sheets
 - Preliminary Title Sheet (by Consultant)
 - Title Sheet (Prepared by NDOT PS&E)
 - Typical Cross-Section Sheets (2-T)
 - Summary of Quantities Sheet (Prepared by NDOT PS&E)
 - ~~Summary Of Soil and Materials Information (2K)~~
 - Wetland Sheets (2W)
 - Aerial Photo Sheets (2A)
 - Horizontal/Vertical Control Sheets (2H)
 - General Notes Sheet (2N)
 - Construction Phasing Plans (2P)
 - Geometric Sheets (2L)
 - ~~Joints and Grades Sheets (2L)~~
 - Storm Drainage Plan and Profile Sheets (2L)
 - Construction Sheets (2L)
 - Removal Sheets (2L)
 - Sediment and Erosion Control Sheets (2L)
 - Trail Plan and Profile Sheets (Start with sheet 3)
 - ~~Traffic Control Sheets~~
 - ~~Pavement Marking & Signing Sheets~~
 - ~~Lighting Plan Sheets~~
 - ~~Landscaping Plan Sheets~~
 - Earthwork Data Sheets
 - Culvert/Channel Cross-Section Sheets
 - Bridge (SP-)
 - Detail Sheets (SP-)
 - Retaining Wall Plan and Profile Sheets (SP-)
 - Retaining Wall Details (SP-)
 - ~~Wastewater Plan and Profile Sheets (SP-)~~
 - ~~Water Main Plan and Profile Sheets (SP-)~~
 - ~~Traffic Signal Plan Sheets (SP-)~~
 - Right of Way Title Sheet (R-1)
 - Right of Way Summary Sheet (R-2)
 - Right-of-Way Plans (R-)
 - Trail Cross-Section Sheets (X-)
 - List of standard plans
 - Summary of quantities (DR forms 355 and Horse Blankets DR form _____)
 - Construction Quantities
 - Special Provisions
 - PS&E Required Sheet DR Form 280
- 7) Project Information Sheet, DR Form 342
- 8) Project Quantity Sheet, DR Form 343E
- 9) Summary of Quantity Sheets, DR Form 355
- 10) ~~Guardrail Summary, DR Form 495~~
- 11) Summary of Quantities and Locations of Surfaced Driveways/Intersections
- 12) Table of Drainage Summary Items, "Horse blankets"
- 13) Length Sheet, DR Form 415
- 14) PS&E Required Sheet, DR Form 263

- 15) Grading Item Summary, DR Form 64E
- 16) Special provisions
- 17) Standard Plan listing
- 18) Special Plan listing
- 19) Opinion of Probable Construction Cost

R. PS&E BLUE LINES

- 1) Address comments or questions during PS&E Review. This includes effort addressing any questions or comments that arise during the PS&E review.
- 2) Revisions per PS&E Comments (not to include errors or omissions). This includes revisions based on PS&E comments that make the plans biddable.
- 3) After PS&E revisions are complete, the Consultant shall produce temporary erosion control worksheets and submit them in electronic form and as half-sized plan sheets, along with the signed and dated plans. The temporary erosion control sheets shall include the following items:
 - a) Topography
 - b) New Design (does not include temporary erosion control design)
 - c) New Drainage
 - d) Wetlands and Legend
 - e) Ditches with slopes and arrows
 - f) Limits of Construction lines
 - g) Restricted Areas
 - h) Contours (Attach the contour file with a "c1" logical name) (Only show contours if there are design contours. This would occur on reconstruction projects, not overlays)
 - i) R.O.W. (If possible) change the legend to match the ROW lines used on your project
- 4) NPDES Notice of Intent (Design Consultant)
- 5) Agency concurrence letters (State of Nebraska Department of Transportation) (NEPA Consultant)
- 6) Traffic Safety Report (Responsible Charge)
- 7) Geotechnical Report (Design Sub-Consultant)
- 8) Summary of Public comments, and response to written comments (NEPA Consultant)

S. GEOTECHNICAL

Overview: The Consultant will provide geotechnical investigations of the subgrade on areas to be surfaced roadways, parking lots, trails with borings every 500 feet unless otherwise directed by the engineer, and prepare the pavement determination.

- 1) **Data Research.** Based upon current site topography, the site grading is expected to be minor, with cuts and fills sloped at 3H:1V or flatter. It is expected 23 soil test borings will be taken with the project. The fee associated with these borings assumes the project site is easily accessible for truck-mounted drilling equipment and rights of access can be obtained from adjacent owners. These test borings will be in accordance with schedules located in the most recent NDOT Geotechnical Policy and Procedures Manual. The field exploration program consists of the following:

Number of Borings	Boring Depth (feet bgs)	Planned Location
18	10	Approx. every 500 feet
3	40	70 th Street Retaining Wall
2	70	Bridge Abutments

- 2) **Design Recommendations.** The Consultant shall prepare geotechnical recommendations for the primary purpose of developing geotechnical design criteria for use in designing retaining walls, bridges, and pavements for the project.
- 3) **Geotechnical Report.** The Consultant shall prepare and submit three (3) copies of a geotechnical report to the RC for review.

Project Information Format and Misc. Items

- 1) ~~**Retaining Wall Design.** Retaining Wall design is not included in this scope of services. The Consultant can provide these services through a Supplemental Agreement if it is determined that retaining walls are needed.~~
- 2) **Construction Engineering Services.** The Consultant will provide Construction Engineering Services, including shop drawing reviews, through a Supplemental Agreement.
- 3) **Right-of-Way Acquisition.** Right-of-Way Acquisition Services are not included in this agreement.

T. SCHEDULE

Project Timeline. The Consultant shall prepare a schedule for project milestone dates and the schedule will be updated quarterly or if dates change. The consultant will show old dates with the updated schedule dates. The schedule will be printed on a separate document as well as included in the agreement. The document will include the project name, the project number, project control number consultant firm name, project manager and date.

Notice to Proceed for PE: March 19, 2018 (Anticipated NTP)

Kickoff Meeting / Site Visit / Initial Project Review / Stakeholder Meeting: March 27, 2018

Complete Preliminary Field Survey: April 30, 2018

Submit Hydraulic Data Sheet (40 days prior to the draft PIH report submittal): June 4, 2018

Submit Bridge TS&L (40 days prior to the draft PIH report submittal): June 4, 2018

Complete ROW Title Search, Legal Description and Ownership plans: August 1, 2018

Complete Preliminary Limits of Construction: August 1, 2018

Submit Plan-in-Hand Plans and draft PIH report: August 1, 2018

Plan-in-Hand: September 5, 2018

Submit Roadway 90% Plans: April 29, 2020

Submit ROW Plans, ROW Estimate, Tract Maps and Legals: April 29, 2020

Submit 90% Bridge Plans: April 29, 2020

PS&E Turn In: January 6, 2021

PS&E Blue line Corrections Submittal: To be determined by NDOT PS&E Construction Division

Preliminary and Final Design

Consultant Estimate of Hours

Project Name: Lincoln Beal Slough Trail
 Project Number: TAP-55(182)
 Control Number: 13366
 Location (City, County): Lincoln, Lancaster
 Firm Name: JEO Consulting Group
 Consultant Project Manager: Nathan Boone, PE
 Phone/Email: 402.474.8745, nboone@jeo.com
 County Project Liaison: Sara Hartzell, Lincoln Parks and Rec
 Phone/Email: 402.441.8261, shartzell@lincoln.ne.gov
 NDOR RC: Jared Rockemann
 Phone/Email: 402.479.3843, jared.rockemann@nebraska.gov
 Date: 10/11/2017

TASKS	PERSONNEL CLASSIFICATIONS-											Total
	QC	RLS	ENV	PM	SENG	ENG	SDES	ADM	SPC	SUR	PI	
For Engineering Services:												
E. Project Management	14			65								79
1 Project Management				60								60
2 Project Description / Purpose and Need				5								5
3 Quality Assurance / Quality Control	14											14
F. Survey			61						30	60		151
1 Preliminary Field Survey		4							30	40		74
2 Digital Terrain Model		20										20
3 Base Map Preparation		20										20
4 Horizontal and Vertical Control		10								10		20
5 Section / Property Corners		6								6		12
6 Existing Utilities		1								4		5
7 Note Reduction / Preliminary Plotting												
G. Trail Design			23	8	97	48						176
1 Complete Form DR-76			2		2							4
2 Data Collection and Review			3		3	4						10
3 Trail Horizontal Alignment					2							2
4 Trail Vertical Alignment					2							2
5 Template Trail Cross sections					3							3
6 Limits of Construction					1							1
7 Earthwork					3	1						4
8 Trail Geometric Design			2		6	4						12
9 Trail and Driveway Culverts			2		6							8
10 Construction and Removal			2									2
11 Limits of Construction					8							8
12 Utility Coordination/Verification			5									5
13 Construction Phasing/Detour Route/Temporary Roads												
14 Erosion Control					30	30						60
15 Quantities/Estimates			2		8	7						17
16 Typical Sections			1									1
17 2W/2A Sheets			1		8							9
18 Guardrail												
19 Floodplain Permitting Identification					1							1
20 Plan-in Hand Meeting/Report			1		6	2						9
21 Working Day Calculations			2									2
22 Pavement Determination					4							4
23 Retaining Wall Design					8	4						12
H. Design Plan Preparation and Assembly			26	88	190							304
1 Plan Sheets												
1a Title Sheet					2	3						5
1b Typical Section Sheet					3	3						6
1c 2A - Aerial Sheet						8						8
1d Centerline Control						5						5
1e 2P - Preliminary Phasing					2	2						4
1f 2L - Construction / Geometrics					20	35						55
1g 2L - Removal Plans					15	15						30
1h 2L - Storm Sewer / Culvert					5	10						15
1i P & P Sheets					5	29						34
1j Special Plans - Wall P & P Sheets					8	4	24					36
1k Cross Sections					18	25	49					92
1l Right-of-Way Ownership Plans					7	7						14
I. Water Line and Sanitary Sewer Relocation/Reconstruction												
1 Water Line												
2 Sanitary Sewer												
J. Utilities			13		17	16						46
1 Assistance			3		6	12						21
2 Coordination of Plan Review			3		4	4						11
3 Meetings with Utilities			7		7							14
K. Right-of-Way Design			4	3	20	24				33		84
1 Existing Right-of-Way Base					1	2						3
2 Proposed Right-of-Way				2	1	6						9
3 Right-of-Way Plan Sheets				1	18	16						35
4 Title Research		2								24		26
5 PIH Staking		1								5		6
6 Negotiation Staking		1								4		5
7) ROW Design Deliverables												
7a Title Research Study Area												
7b Title Vesting Document												
7c List all owners of record of parcel												
7d Certificate of Title Report												
7e Copies of all supporting documentation												
7f If applicable, copies of subdivision plats and surveys												
7g Copies of deeds, easements, dedications, etc.												
7h Copies of County Cadastral Maps that do not have GIS website												

Consultant Independent Cost Estimate
 Estimate of Hours

Preliminary and Final Design

Consultant Estimate of Hours

Project Name: Lincoln Beal Slough Trail
 Project Number: TAP-55(182)
 Control Number: 13366
 Location (City, County): Lincoln, Lancaster
 Firm Name: JEO Consulting Group
 Consultant Project Manager: Nathan Boone, PE
 Phone/Email: 402.474.8745, nboone@jeo.com
 County Project Liaison: Sara Hartzell, Lincoln Parks and Rec
 Phone/Email: 402.441.8261, shartzell@lincoln.ne.gov
 NDOR RC: Jared Rockemann
 Phone/Email: 402.479.3843, jared.rockemann@nebraska.gov
 Date: 10/11/2017

TASKS	PERSONNEL CLASSIFICATIONS*												Total
	QC	RLS	ENV	PM	SENG	ENG	SDES	ADM	SPC	SUR	PI		
For Engineering Services:													
L. Bridge Design Services													
1 Project Plans Format, Conventional and CADD						72	60	8		10	10	160	
3 Hydraulic Survey						1						1	
4 Hydraulic Analysis						10	60			10	10	30	
5 Bridge Design Data Sheets & Bridge TS&L Plans for Hyd. Structure						50						110	
5a Bridge Design Data Sheet and TS&L						10		8				18	
5b NDOR form DR67													
5c General description/layout of proposed bridge on TS&L plan						1						1	
6) Final Bridge Design and Development of Bridge Plans													
6a Final Bridge Design	8					40	26	43				117	
6d Front Sheet						4						4	
6e General Notes, Quantities and Index						6	2	6				14	
6f General Plan & Elevation Plan						2	2	2				6	
6g Bridge Coordinate Plan													
6h Geology Plan & Elevation Plan						4	1	6				11	
6i Foundation/Pile Layout Plan						4	4	4				12	
6j Abutment Plan						10	10	20				40	
6k Pier/Bent Plan													
6l Beam Framing Plan													
6m Beam/Girder Details													
6n Typical Section/Trail Cross Section													
6o Bearing Plan													
6p Slab Reinforcement Plan													
6q Approach Slabs													
6r Concrete Rail/Barrier Sheet													
6s Bill of Bar Sheet with Bending Diagrams						4	4	5				13	
6t Load Rating													
7 90% Bridge Plan Submittal						6	3					9	
8 Requirements for Bridge Design Plans	8											8	
M. Environmental Coordination													
1 Review of NEPA documents and commitments						26	6	15	20	10		77	
2 NEPA exhibits						2			2			4	
3 Preliminary Waterway Permit Data Sheet								2	10	10		22	
4 Wetlands Impacts									4			6	
5 Permits						6						6	
5a Floodplain Permit								5				5	
5b Army Corps of Engineers 404 permit													
5c NPDES, SWPPP & NOI						12	6	8	4			30	
5d Activity Checklist													
5e NEPA Coordination													
5f Wetland Impact calculations						4						4	
5g Scope of project identification													
5h Public involvement postal outreach													
N. PS&E Submittal													
1 Draft PS&E Submittal						14		51	45	3		113	
2 Final PS&E Submittal						5		25	25	2		57	
3 Special Provisions						3		20	20	1		44	
4 Bid Justification						4		6				10	
						2						2	
O. Project Meetings													
1 Plan-In-Hand Meeting/Report						15		16	4			35	
2 Owner Meetings						3		4	4			11	
						12		12				24	
P. Deliverables													
1 Preliminary Trail Design													
1a Monthly Invoices and Progress Reports						Included in Task G & H hours							
1b Meeting Minutes for all meetings													
1c Hydraulic Report and Data Sheet													
1d Deliverables for Plan-In-Hand Phase													
1d i Preliminary Waterway Permit Data Sheet, DR Form 290													
1d ii Erosion Control Plan-in-Hand Checklist, Exh. G of DPO if applicable													
1d iii FAA Form 7460-1 when applicable													
1d iv Railroad Project Information Sheet, DR Form 95, if applicable													
1d v Two half-size set Plan-in-Hand Plans													
1d vi Project Information Sheet, DR Form 342													
1d vii Project Quantity Sheet, DR Form 343E													
1d viii Draft Plan-in-Hand Report													
1d ix Plan-In-Hand plans with comments consolidated on one set													
1e Final Plan-in-Hand Report													
1f Plans/display projects relation to mapped floodplains/floodways													
1g Opinion of Probable Construction Cost													
1h Construction and working day estimates													
2 Final Trail Design													
2a Certification of Compliance, DR Form						Included in Task N-1 hours							
2b Final plans													
2c Floodplain certification and documentation													
2d Floodplain Certification Memo													
2e Project Quantity Sheet, DR Form													
2f Construction and working day estimates													

Consultant Independent Cost Estimate
 Estimate of Hours

Preliminary and Final Design

Consultant Estimate of Hours

Project Name: Lincoln Beal Slough Trail
 Project Number: TAP-55(182)
 Control Number: 13366
 Location (City, County): Lincoln, Lancaster
 Firm Name: JEO Consulting Group
 Consultant Project Manager: Nathan Boone, PE
 Phone/Email: 402.474.8745, nboone@jeo.com
 County Project Liaison: Sara Hartzell, Lincoln Parks and Rec
 Phone/Email: 402.441.8261, shartzell@lincoln.ne.gov
 NDOR RC: Jared Rockemann
 Phone/Email: 402.479.3843, jared.rockemann@nebraska.gov
 Date: 10/11/2017

TASKS	PERSONNEL CLASSIFICATIONS**										
	QC	RLS	ENV	PM	SENG	ENG	SDES	ADM	SPC	SUR	PI
For Engineering Services:											
Q. Deliverables for Final Plans (PS&E) Phase											
1 Revised Waterway Permit Data Sheet, DR Form 290											
2 Floodplain Certification and documentation											
3 Floodplain Certification Memo											
4 Concrete Box Culvert Request Sheet, DR Form 67											
5 Opinion of Probable Construction Cost											
6 Two half-size set and one full-size set of Final Plans											
7 Project Information Sheet, DR Form 342											
8 Project Quantity Sheets, DR Form 343E											
9 Summary of Quantity Sheets, DR Form 355											
10 Guardrail Summary, DR Form 195											
11 Summary of Quantities and Locations of Surfaced Driveways/Inters.											
12 Table of Drainage Summary Items, "Horse blankets"											
13 Length Sheet, DR Form 263											
14 PS&E Required Sheet, DR Form 263											
15 Grading Item Summary, DR Form 64E											
16 Special provisions											
17 Standard Plan listing											
18 Special Plan listing											
19 Opinion of Probable Construction Cost											
R. PS&E Blueprints											
1 Address comments or questions during PS&E Review				5	4	16	25				50
2 Revisions per PS&E Comments				2	2	5	8				15
3 Temporary Erosion Control Sheets											
3a Topography						1	1				2
3b New Design						1	2				3
3c New Drainage						1	2				3
3d Wellheads and Legend						1	1				2
3e Ditches with slopes and arrows						1	4				5
3f Limits of Construction lines						1	2				3
3g Restricted Areas						1	3				4
3h Contours						1	1				2
3i R.O.W.						1	1				2
4 NPDES Notice of Intent				4							4
5 Agency concurrence letters											
6 Traffic Safety Report											
7 Geotechnical Report				1							1
8 Summary of Public comments and response to written comments											
S. Geotechnical Evaluation											
1 Data Research											
2 Design Recommendations											
3 Geotechnical Report											
By Subconsultant - Terracon											
Total Hours	22	65	31	143	161	411	413	3	40	103	1,392
Total Days (8 hrs)	2.8	8.1	3.9	17.9	20.1	51.4	51.6	0.4	5.0	12.9	174.0

ATIONS:
 QC = Quality Control
 RLS = Registered Land Surveyor
 ENV = Environmental Scientist
 ADM = Administrative
 PM = Project Manager
 ENG = Engineer
 SDES = Senior Designer/Technician
 SENG = Senior Engineer
 SPC = Survey Party Chief
 SUR = Surveyor I
 PI = Public Involvement

** For User-Defined Classifications, you will need to edit the Classifications Legend located above. To enter a new classification, replace "UD1" with its abbreviation (ex. GRA) and

Preliminary and Final Design Labor Rates

Project Name: Lincoln Beal Slough Trail
 Project Number: TAP-55(182)
 Control Number: 13368
 Location (City, County): Lincoln, Lancaster
 Firm Name: JEO Consulting Group
 Consultant Project Manager: Nathan Boone, PE
 Phone/Email: 402.474.8745, nboone@jeo.com
 County Project Liaison: Sara Hartzell, Lincoln Parks and Rec
 Phone/Email: 402.441.8261, shartzell@lincoln.ne.gov
 NDOR RC: Jared Rockemann
 Phone/Email: 402.479.3843, jared.rockemann@nebraska.gov
 Date: 10/11/2017

Code	Classification Title	Hours	Blended Rate	Amount
QC	Quality Control	22	\$69.71	\$1,533.62
RLS	Registered Land Surveyor	65	\$39.42	\$2,562.30
ENV	Environmental Scientist	31	\$26.12	\$809.72
PM	Project Manager	143	\$48.05	\$6,871.15
SENG	Senior Engineer	161	\$50.47	\$8,125.67
ENG	Engineer	411	\$34.77	\$14,290.47
SDES	Senior Designer/Technician	413	\$36.95	\$15,260.35
ADM	Administrative	3	\$19.00	\$57.00
SPC	Survey Party Chief	40	\$26.84	\$1,073.60
SUR	Surveyor I	103	\$25.64	\$2,640.92
PI	Public Involvement		\$43.41	
TOTALS		1553		\$53,224.80

Overhead Rate: 185.33% Fixed Fee: 13.30%
 FCCM (if applicable): 0.62%

CLASSIFICATIONS:
 QC = Quality Control PM = Project Manager SPC = Survey Party Chief
 RLS = Registered Land Surveyor ENG = Engineer SUR = Surveyor I
 ENV = Environmental Scientist SDES = Senior Designer/Technician PI = Public Involvement
 ADM = Administrative DES = Designer/Technician

Blended Rates Worksheet

STAFFING PLAN				
EMPLOYEE NAME		CLASSIFICATION¹	SALARY RATE	% ASSIGNED²
Quality Control				
Eric Dixon		Sr. Transportation Manager, PE	\$69.71	100.00%
			Blended Rate:	\$69.71
Registered Land Surveyor				
Ron Nissen		Survey Project Manager, LS	\$39.42	100.00%
			Blended Rate:	\$39.42
Environmental Scientist				
Jason Morovitz		Lead Scientist	\$39.90	18.00%
Miranda Cynova		Scientist	\$23.10	82.00%
			Blended Rate:	\$26.12
Project Manager				
Nathan Boone		Project Manager, PE	\$48.05	100.00%
			Blended Rate:	\$48.05
Senior Engineer				
Julie Ogden		Sr. Project Manager, PE	\$47.84	5.00%
Steve Arens		Project Manager, PE, SE	\$52.88	70.00%
JD Johnson		Sr. Project Engineer, PE	\$44.23	25.00%
			Blended Rate:	\$50.47
Engineer				
Brent Ciecior		Engineer, EI	\$32.21	80.00%
Jesse Sire		Engineer, PE	\$45.00	20.00%
			Blended Rate:	\$34.77
Senior Designer/Technician				
Quinten Jordan		Sr. Designer	\$39.90	84.00%
Beth Strunk		Bridge Designer	\$21.45	16.00%
			Blended Rate:	\$36.95
Administrative				
Sarah Korf		Administrative Assistant	\$19.00	100.00%
			Blended Rate:	\$19.00
Survey Party Chief				
Tyler Weers		Survey Technician	\$26.84	100.00%
			Blended Rate:	\$26.84
Surveyor I				
John McLaughlin		Survey Technician	\$26.84	80.00%
Brandon Wood		Survey Technician	\$20.84	20.00%
			Blended Rate:	\$25.64
Public Involvement				
Steve Wolf		Public Involv Director, MCP3	\$61.30	40.00%
Andrea Gebhart		Public Involv Technician	\$31.49	60.00%
			Blended Rate:	\$43.41

¹ Input actual employee classification as designated by firm.

² Total of % Assigned must equal 100% for each personnel classification category. If one person in classification, list them as 100% for "% Assigned".

Consultant Independent Cost Estimate
Labor Rates

Preliminary and Final Design

Direct Expenses

Project Name: Lincoln Beal Slough Trail
 Project Number: TAP-55(182)
 Control Number: 13366
 Location (City, County): Lincoln, Lancaster
 Firm Name: JEO Consulting Group
 Consultant Project Manager: Nathan Boone, PE
 Phone/Email: 402.474.8745, nboone@jeo.com
 County Project Liaison: Sara Hartzell, Lincoln Parks and Rec
 Phone/Email: 402.441.8261, shartzell@lincoln.ne.gov
 NDOR RC: Jared Rockemann
 Phone/Email: 402.479.3843, jared.rockemann@nebraska.gov
 Date: 10/11/2017

Subconsultants:	Quantity	Unit Cost	Amount
Terracon	1	\$13,700.00	\$13,700.00
Subtotal			\$13,700.00

Printing and Reproduction:	Quantity	Unit Cost	Amount
Subtotal			

Mileage/Travel:	Quantity	Unit Cost	Amount
		\$0.535	
		\$0.535	
		\$0.535	
		\$0.535	
		\$0.535	
Subtotal			

Lodging/Meals:	Quantity	Unit Cost	Amount
Subtotal			

Other Miscellaneous Costs:	Quantity	Unit Cost	Amount
Misc. Survey costs			
Subtotal			

TOTAL DIRECT EXPENSES			\$13,700.00
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Per Diem Rates: <http://www.qsa.gov/portal/category/104711>
 Mileage Rates: <http://www.qsa.gov/portal/category/104715>

2011 Standard Rates*	
Type	Rate
Black and White Copies	Actual reasonable cost
Color Copies	Actual reasonable cost
Miscellaneous Postage, Mailing, Deliveries Etc.	Actual reasonable cost
Equipment	Actual reasonable cost
Privately Owned Vehicle	Actual reimbursement amount to employee, not to exceed rates for company vehicles outlined above
Automobile Rental	Actual reasonable cost
Air fare	Actual reasonable cost, giving the State all discounts
	Statewide Omaha/Douglas County
Breakfast	
Lunch	
Dinner	
Incidentals	
Totals	

* A full list of rates can be found at the following website: www.qsa.gov/perdiem

Preliminary and Final Design

Project Cost

Project Name: Lincoln Beal Slough Trail
 Project Number: TAP-55(182)
 Control Number: 13366
 Location (City, County): Lincoln, Lancaster
 Firm Name: JEO Consulting Group
 Consultant Project Manager: Nathan Boone, PE
 Phone/Email: 402.474.8745, nboone@jeo.com
 LPA Responsible Charge: Sara Hartzell, Lincoln Parks and Rec
 Phone/Email: 402.441.8261, shartzell@lincoln.ne.gov
 NDOR Project Coordinator: Jared Rockemann
 Phone/Email: 402.479.3843, jared.rockemann@nebraska.gov
 Date: October 11, 2017

Direct Labor Costs:			
Personnel Classification	Hours	Rate	Amount
Quality Control	22	\$69.71	\$1,533.62
Registered Land Surveyor	65	\$39.42	\$2,562.30
Environmental Scientist	31	\$26.12	\$809.72
Project Manager	143	\$48.05	\$6,871.15
Senior Engineer	161	\$50.47	\$8,125.67
Engineer	411	\$34.77	\$14,290.47
Senior Designer/Technician	413	\$36.95	\$15,260.35
Administrative	3	\$19.00	\$57.00
Survey Party Chief	40	\$26.84	\$1,073.60
Surveyor I	103	\$25.64	\$2,640.92
Public Involvement		\$43.41	
TOTALS	1392		\$53,224.80

Direct Expenses:		Amount
Subconsultants		\$13,700.00
Printing and Reproduction Costs		
Mileage/Travel		
Lodging/ Meals		
Other Miscellaneous Costs		
TOTALS		\$13,700.00

Total Project Costs:		Amount
Direct Labor Costs		\$53,224.80
Overhead @ 185.33%		\$98,641.52
Total Labor Costs		\$151,866.32
Fixed Fee @ 13.30%		\$20,198.22
Facility Capital Cost of Money (FCCM) @ 0.62% (direct labor cost x FCCM%)		\$329.99
Direct Expenses		\$13,700.00
PROJECT COST		\$186,094.53

June 5, 2017



JEO Consulting Group, Inc.
2700 Fletcher Avenue
Lincoln, Nebraska 68504-1113

Attn: Mr. Nathan Boone – Project Manager
P: 402.435.3080
E: nboone@jeo.com

Re: Proposal for Geotechnical Engineering Services
Beal Slough Trail
S 56th Street & London Road
Lincoln, Nebraska
Terracon Proposal No. PA3175049rev1

Dear Mr. Boone:

We appreciate the opportunity to submit this proposal to JEO Consulting Group, Inc. (JEO) to provide geotechnical engineering services for the above referenced project. The following are exhibits to the attached Agreement for Services:

Exhibit A	Project Understanding
Exhibit B	Scope of Services
Exhibit C	Compensation and Project Schedule

We will deliver our information, opinions and recommendations using **GeoReport**, a web-based, information delivery and collaboration portal. If you are reading this on a device with internet access, click [here](#) to watch a 2-minute video that will provide a better understanding of the **GeoReport** experience.

We believe our experience in similar project types and exploring areas around the proposed project site will provide us with more information to better understand the conditions of the on-site soils. Below is a photograph of areas around the proposed project site where we have information available:

Terracon Consultants, Inc. 3220 N 20th Street, Suite #3 Lincoln, Nebraska 68521
P (402) 466 3911 F (402) 466 0811 terracon.com

Environmental



Facilities



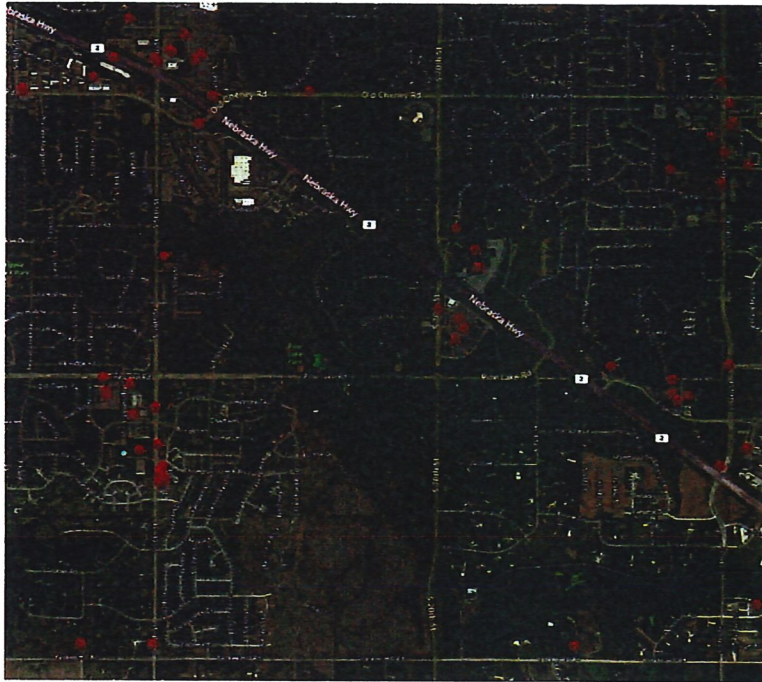
Geotechnical



Materials

Proposal for Geotechnical Engineering Services
Beal Slough Trail ■ Lincoln, Nebraska
June 5, 2017 ■ Terracon Proposal No. PA3175049rev1

Terracon



Our base fee to perform the scope of services described in this proposal is \$13,700. See Exhibit C for more details of our fees and consideration of additional services. Your authorization for Terracon to proceed in accordance with this proposal can be issued by signing and returning a copy of the attached Task Order to our office. If you have any questions, please do not hesitate to contact us.

Sincerely,
Terracon Consultants, Inc.

Levi E. Brown
Levi E. Brown, E.I.
Staff Engineer

Bradley A. Levich
Bradley A. Levich, P.E.
Principal

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Reference Number: PA3175049rev1

MASTER SERVICES AGREEMENT

TASK ORDER

This **TASK ORDER** is issued under the **MASTER SERVICES AGREEMENT** (dated 09/08/2005, agreement reference number Z0505121) between JEO Consulting Group Inc ("Client") and Terracon Consultants, Inc. ("Consultant") for Services to be provided by Consultant for Client on the Beal Slough Trail project ("Project"), as described in the Project Information section of the Consultant's Task Order Proposal dated 06/05/2017 ("Task Order Proposal") unless the Project is otherwise described below or in Exhibit A to this Task Order (which section or Exhibit are incorporated into this Task Order). This Task Order is incorporated into and part of the Master Services Agreement.

1. Project Information

Geotechnical exploration and recommendation report for the proposed Beal Slough Trail beginning at S 56th Street & London Road in Lincoln, NE.

2. Scope of Services

The scope of Services to be provided under this Task Order are described in the Scope of Services section of the Consultant's Task Order Proposal, unless Services are otherwise described below or in Exhibit B to this Task Order.

Scope according to Terracon Proposal No. PA3175049rev1.

3. Compensation

Client shall pay compensation for the Services performed at the fees stated in the Task Order Proposal unless fees are otherwise stated below or in Exhibit C to this Task Order.

Compensation according to Terracon Proposal No. PA3175049rev1.

All terms and conditions of the **Master Services Agreement** shall continue in full force and effect. This Task Order is accepted and Consultant is authorized to proceed.

Consultant: **Terracon Consultants, Inc.**
By: Bradley A. Levich Date: 5/26/2017
Name/Title: **Bradley A Levich, P.E. / Office Manager**
Address: **3220 N 20th St Ste 3**
Lincoln, NE 68521-1382
Phone: **(402) 466-3911** Fax: **(402) 466-0811**
Email: **Brad.Levich@terracon.com**

Client: **JEO Consulting Group Inc**
By: _____ Date: _____
Name/Title: **Nathan Boone**
Address: **2700 Fletcher Avenue**
Lincoln, NE 68504-1113
Phone: **(402) 474-8745** Fax: _____
Email: **nboone@jeo.com**

Reference Number: PA3175049rev1

EXHIBIT A - PROJECT UNDERSTANDING

Our scope of work is based on our understanding of the project as described to us by JEO. We have not visited the project site to confirm the information provided. Aspects of the project that are undefined or assumed at this point are highlighted as shown below. We request the design team provide input to verify this information prior to our initiation of field exploration activities.

Site Location

Item	Description
Location	The trail begins at S 56th Street & London Road and ends at 70 th Street & Yankee Hill Road. Latitude: 40°44' 54.10" N, Longitude: 96° 38' 46.11" W.
Existing improvements	Surrounding developments, railroad tracks running parallel with most of the trail, and existing pavement in adjacent streets.
Current ground cover	Grass lots with trees.
Existing topography	Based on review of USGS quadrangle maps and information from Google Earth Pro, grade change of about 1,258 feet at 56 th & London Road to 1,312 feet at 70 th & Yankee Hill Road is estimated along the extent of the trail (grade change of around 54 feet, beginning to end).
Site history	Review of aerial photos dating back to 1993 indicates the areas surrounding the path of the proposed trail have remained relatively unchanged since 1993.
Site access	We expect that the site can be accessed and all exploration locations can be reached with our ATV drilling equipment. Some modification to boring locations maybe required depending on access provided. Our fee does not include tree clearing.

Project Understanding

Item	Description
Information provided	Information provided by Nathan Boone of JEO on Tuesday, May 16 th , 2017 via email.



Item	Description
Project description	<p>According to the information provided by JEO:</p> <p>The City of Lincoln would like to construct the Beal Slough trail extending east and south from 56th and London Rd. to 70th and Yankee Hill Rd. The trail will parallel the east side of the Beal Slough Channel between 56th and London Rd. and going southeasterly to 70th Street and Yankee Hill Rd. The trail will be on city owned property to Pine Lake Rd. It will connect with an underpass at Pine Lake Rd. where a section of trail will be completed as part of the Pine Lake Improvement project from the underpass to just east of the OPPD railroad tracks. (This project will be completed prior to construction of the trail). The trail will continue from that point south paralleling the railroad tracks and Beal Slough to just before 70th Street. The trail will connect with 70th street north of the current railroad crossing and then proceed south, crossing the railroad tracks and parallel 70th Street on the west side to Yankee Hill Rd. The Yankee Hill Rd. Trail is expected to be completed in fiscal year 2016-17. If the trail along Yankee Hill Rd. has not been completed by the time the Beal Slough Trail project has started, a trailhead will be constructed to accommodate 6-8 vehicles off of 70th Street.</p>
Proposed structure	<p>According to the information provided by JEO:</p> <p>This project will be 2.22 miles in length. It will be a ten feet wide 5 inch depth concrete. We will need to purchase ROW from the property owner immediately south of Pine Lake Road on the east side of the railroad tracks that will be approximately 20 feet wide and 1315 feet in length. The city currently has a permanent easement on this parcel for a sewer line which the trail will follow. There will also be the need to obtain ROW from a private property owner that will connect the trail from property the city owns with 70th Street. This ROW acquisition will need to be approximately 20 feet wide and 174 feet in length.</p>
Grading/slopes	<p>Grading plan not provided at the time of this proposal. Boring depths may be adjusted per provided unit rate if significant cuts/fills are to occur.</p> <p>Cut and fill slopes assumed to be 3H:1V or flatter.</p>
Below grade structures	<p>Retaining walls are expected to achieve the final grade, and the client has indicated locations of the retaining walls for geotechnical exploration, however according to Nathan Boone, wall heights are currently unknown as they have not yet been designed. The retaining wall and underpass structures designed by others where the proposed trail crosses Pine Lake Road are not a part of our exploration and will not be discussed in the recommendations of our report. The recommendations of our report would not be applicable to any unexplored areas. Terracon would be happy to assist in the design of these structures and can provide a separate proposal to the other designer if desired.</p>
Pavements	<p>Trail will consist of PCC pavement.</p>



EXHIBIT B - SCOPE OF SERVICES

Our proposed scope of services consists of field exploration, laboratory testing and engineering/project delivery. These services are described in the following sections.

Field Exploration

The field exploration program consists of the following:

Number of Borings	Boring Depth (feet bgs)	Planned Location
18	10'	Approx. every 500 feet along the proposed path
3	40'	70 th Street retaining wall
2	70'	Bridge abutments

Note 1: Boring depth may be adjusted after review of grading plans.

Boring Layout and Elevations: We anticipate a site visit will be necessary for locating appropriate boring locations that are accessible to our drill rig. Our methods to locate the borings on the project site are expected to generate an estimated horizontal accuracy of about ± 20 feet using handheld GPS equipment. Field measurements from existing site features may also be utilized. If available, approximate elevations are obtained by interpolation from a site specific, surveyed topographic map.

Subsurface Exploration Procedures: We advance the soil borings with an ATV drill rig using continuous flight augers (solid stem and/or hollow stem as necessary depending on soil conditions). Four samples are obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. Soil sampling is typically performed using thin-wall tube and/or split-barrel sampling procedures. The samples are placed in appropriate containers and taken to our soil laboratory for testing and classification by a geotechnical engineer. We also observe and record groundwater levels during drilling and sampling.

Our exploration team prepares field boring logs as part of the drilling operations, which include sampling depths, penetration distances, and other sampling information. These field logs include visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs, prepared from the field logs, represent the geotechnical engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Property Disturbance: Borings are backfilled with auger cuttings after their completion. Pavements are patched with cold-mix asphalt and/or "sackcrete" concrete, as appropriate. Our services do not include repair of the site beyond backfilling our boreholes and cold patching



existing pavements. Excess auger cuttings are dispersed in the general vicinity of the borehole. Because backfill material often settles below the surface after a period of time, we recommend the boreholes be checked periodically and backfilled if necessary. We can provide this service or grout the holes for additional fees at your request.

Laboratory Testing

The project engineer reviews the field data and assigns various laboratory tests to better understand the engineering properties of the various soil strata as necessary for this project. Testing will include visual classification, moisture content, dry density, and strength tests (unconfined compression/calibrated penetrometer) as appropriate. In addition to our standard testing, Atterberg Limits tests may be performed on up to ten selected samples. In the event additional testing is necessary we will notify you of this need prior to initiating the additional testing and will not proceed without your approval.

Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods are applied as a result of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- ASTM D2166/D2166M Standard Test Method for Unconfined Compressive Strength of Cohesive Soil

The laboratory testing program often includes examination of soil samples by an engineer. Based on the material's texture and plasticity, we describe and classify the soil samples in accordance with the Unified Soil Classification System.

Safety

Terracon is currently not aware of any environmental concerns at this project site that would create health or safety hazards associated with our exploration program; thus, our scope considers that standard Level D Personal Protection Equipment (PPE) is appropriate. Our scope of services does not include any level of environmental site assessment services, but identification of unusual or unnatural materials encountered while drilling will be noted on our logs and discussed in our report.



As our exploration efforts require borings (and possibly excavations) into the subsurface, Terracon will comply with local regulations to request a utility location service Nebraska One Call. We will consult with the owner/client regarding potential utilities, or other unmarked underground hazards. Based upon the results of this consultation, we will consider the need for alternative methods to proceed with the subsurface exploration, taking into account the safety of our field crew.

Site Access: In order to conduct our field services, Terracon must be granted access to the site by the property owner. By acceptance of this proposal, without information to the contrary, we consider this as authorization to access the property for the purpose of conducting the field exploration in accordance with the scope of services. Traffic control will likely be required for our exploration along S 70th Street. Additional fees for Terracon arranging traffic control will be cost plus 15% as expressed in **Exhibit C - Compensation and Project Schedule**.

Engineering and Project Delivery

The results of our field and laboratory programs will be evaluated by a professional geotechnical engineer. The engineer will develop a geotechnical site characterization, perform the engineering calculations necessary to evaluate support alternatives and develop appropriate geotechnical engineering design criteria for the earth-connected phases of the project. At the completion of our engineering analyses, we will prepare a geotechnical engineering report.

Your project will be delivered using our **GeoReport** system. Upon initiation of the project we will provide you and your design team the necessary link and password to access the site (if you don't already have one). Each project includes a calendar to track the schedule, an interactive site map, a listing of team members, and access to all project documents as they are uploaded to the site, and a collaboration portal. A typical delivery process includes three basic stages:

- Stage 1: Project Planning
- Stage 2: Site Characterization
- Stage 3: Geotechnical Engineering

When utilized, a collaboration portal documents communication, eliminating the need for long email threads. This collaborative effort allows for prompt evaluation and discussion of options related to the design and associated benefits and risks of each option. With the ability to inform all parties as the work progresses, decisions and consensus can be reached faster. In some cases, only minimal uploads and collaboration will be required because options for design and construction are limited or unnecessary. This is typically the case for uncomplicated projects with no anomalies found at the site.



At the completion of our services we will upload a printable version of our complete final geotechnical engineering report. This will include the professional engineer's seal and signature that documents our services. All previous submittals, collaboration (if any), and the final report will be maintained in our system indefinitely for future reference and integration into subsequent aspects of our services as the project goes through final design and construction.

The final geotechnical engineering report provides the following:

- Soil boring logs with field and laboratory data, soil stratification based on visual soil classification
- Groundwater levels observed during and after completion drilling
- Site and Boring location plans
- Subsurface exploration procedures
- Description of subsurface conditions
- Subgrade preparation/earthwork recommendations
- Lateral earth pressure recommendations and general parameters for MSE walls
- Foundation recommendations for new bridge including LRFD parameters.
- Our scope does not include global stability or detailed design of retaining walls.

Additional Services

In addition to the basic services noted above, the following, additional services are often associated with the geotechnical engineering services. The fees for the basic services noted above do not include the following services.

Review of Plans and Specifications: Our geotechnical report and associated verbal and written communications will be used by others in the design team to develop plans and specifications for construction. Our review of the project plans and specifications is a vital part of the geotechnical engineering service. It consists of our review of those portions of the project plans and specifications that are related to site preparation, retaining wall foundation, and pavement construction. Our review will include a written statement that conveys our opinions related to the plans and specifications' consistency with our geotechnical engineering recommendations. Terracon could also be retained for global stability and retaining wall design services.

Observation and Testing of Pertinent Construction Materials: Development of our geotechnical engineering recommendations and report relies on an interpretation of soil conditions based upon widely spaced exploration locations and assumptions that construction methods will be performed in a manner sufficient to meet our expectations and consistent with recommendations made at the time the geotechnical engineering report is issued. We should be retained to conduct construction observations and perform/document associated materials testing

Proposal for Geotechnical Engineering Services
Beal Slough Trail ■ Lincoln, Nebraska
June 5, 2017 ■ Terracon Proposal No. PA3175049rev1



associated with site preparation, retaining wall foundation and pavement construction. This allows a more comprehensive understanding of the subsurface conditions and also for necessary documentation of construction to confirm and/or modify (when necessary) the assumptions and recommendations made by our engineers.

Perform Environmental Assessments: Our scope for this project does not include, either specifically or by implication, any environmental assessment of the site intended to identify or quantify potential site contaminants. If the client and/or owner is concerned about the potential for such conditions and/or contamination, an environmental site assessment should be conducted.



EXHIBIT C - COMPENSATION AND PROJECT SCHEDULE

Compensation

Based upon our understanding of the site and the project as summarized in **Exhibit A** and our planned scope of services outlined in **Exhibit B**, our base fee is shown in the following table:

Task	Lump sum fee
Geotechnical Exploration, Laboratory Testing, Geotechnical Engineering Report	\$13,700

Additional services not part of the base fee include the following:

Additional Services (see Exhibit B)	Lump Sum Fee	Initial for Authorization
Private Locates ¹	Cost +15%	
Traffic Control	Cost +15%	
Plans and Specifications Review	\$500	
Construction Materials Testing Services	TBD	
Global Stability and Retaining Wall Design	TBD	

1. If the owner/client is not able to accurately locate private utilities, we can subcontract a private utility locating firm and/or utilize geophysical equipment if required or deemed necessary. The detection of underground utilities is dependent upon the composition and construction of utility lines. Some utilities are comprised of non-electrically conductive materials and may not be readily detected. The use of a private locate service does not relieve the owner of their responsibilities in identifying private underground utilities.

Our scope of services does not include services associated with site clearing, wet ground conditions, tree or shrub clearing, or repair of/damage to existing landscape. If such services are needed or desired by the owner/client, we should be notified so we can adjust our scope of services.

Unless instructed otherwise, we will submit our invoice(s) to the address shown at the beginning of this proposal. If conditions are encountered which require work scope revisions and/or result in higher fees, we will contact you for approval prior to initiating these services and send a supplemental proposal stating the modified scope of services as well as its effect on our fee. We will not proceed without your authorization, as evidenced by your signature on the Supplemental Agreement for Services form.

Project Schedule

We have developed a schedule to complete the scope of services based upon our existing availability at the date of this proposal. The schedule below is predicated upon our current

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EXHIBIT C - COMPENSATION AND PROJECT SCHEDULE 1
of 2

Proposal for Geotechnical Engineering Services
Beal Slough Trail ■ Lincoln, Nebraska
June 5, 2017 ■ Terracon Proposal No. PA3175049rev1



availability and our understanding of your schedule needs, but does not account for any delays in field exploration beyond our control, such as weather conditions, permit delays, or lack of permission to access the boring locations. In the event the schedule provided is inconsistent with your needs, please contact us so we may consider alternatives.

GeoReport Stage	Posting Date ^{1, 2}
Project Planning	1 week prior to drilling (week before July 31 st)
Site Characterization (drilling)	After July 31 st per Migratory Bird Act to avoid long-eared bats
Geotechnical Engineering	4 to 6 weeks after field exploration

1. Upon receipt of your notice to proceed we will activate the schedule component of our **GeoReport** website with specific, anticipated calendar dates for the three delivery points noted above as well as other pertinent events such as field exploration crews on-site, etc.
2. We will maintain a current calendar of activities within our **GeoReport** website. In the event of a need to modify the schedule, the schedule will be updated to maintain a current awareness of our plans for delivery.

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EXHIBIT C - COMPENSATION AND PROJECT SCHEDULE 2
of 2

1. PAYMENT METHOD

Payments under this Agreement will be made based on a Cost Plus Fixed Fee for Profit (CPFF) payment method. Consultant will be paid for acceptable actual services performed plus a fixed fee for profit in accordance with Section 4. PAYMENTS.

2. TOTAL AGREEMENT AMOUNT

For completion of the services as outlined in this Agreement, Consultant will be paid up to the following amounts:

- \$ 165,896.61 for actual services performed and direct expenses.
- \$ 20,198.22 for a fixed fee for profit
- \$ 186,094.53 total agreement amount. Consultant's total compensation shall not exceed this maximum amount without prior written approval of State.

3. FIXED FEE FOR PROFIT

The fixed fee for profit is computed upon the negotiated direct labor and overhead costs. The fixed fee for profit is not allowable upon direct non-labor costs. For each invoicing period, the fixed fee for profit is calculated by multiplying the sum of the actual direct labor and overhead costs invoiced by the negotiated fee for profit rate of 13.30%. Upon completion of the services outlined in this Agreement, the Consultant may invoice the State any remaining fixed fee for profit not previously invoiced, up to the maximum fixed fee for profit of \$20,198.22. The total fixed fee for profit eligible to be paid to consultant does not vary with actual costs, but may be increased or decreased as a result of scope changes in the agreement. If all of the services under this agreement are not completed for any reason, the fixed fee for profit may be adjusted based on the State's determination of the actual percentage of services completed.

4. ALLOWABLE COSTS

Payment for Services under this Agreement will be made based on the payment method identified in Section 1. PAYMENT METHOD, up to the maximum amount identified in Section 2. TOTAL AGREEMENT AMOUNT. Allowable costs include direct labor costs, Subconsultant costs and other direct non-labor costs, and overhead costs.

A. Direct Labor Costs are the earnings that individuals receive for the time they are working directly on the project.

1) Hourly Rates: For hourly employees, the hourly earnings rate shall be the employee's straight time hourly rate for the pay period in which the work was performed. If overtime hours are worked on this project, the premium pay portion of those hours is not allowable as a direct labor cost.

For salaried employees, the hourly earnings rate shall be their actual hourly rate as recorded in the Consultant's accounting books of record.

2) Time reports: The hours charged to the project must be supported by adequate time distribution records that clearly indicate the distribution of hours to all projects/activities on a daily basis for the entire pay period. Time reports must provide a clear identifying link to the projects: such as project description, project number, pertinent work phase, dates of service, and the individual's name and position. There must be an adequate system of internal controls in place to ensure that time charges are correct and have the appropriate supervisory approval.

- B. Direct Non-Labor Costs: These costs include all necessary, actual, properly documented, and allowable costs related to the Consultant completing the Services. All costs must be supported by detailed receipts or invoices. Direct non-labor costs include, but are not limited to, the following:

Transportation, mileage, lodging, and meals, subject to limitations specified below; Communication costs; Reproduction and printing costs; Special equipment and materials required for the project and approved by LPA, or State on LPA's behalf; Special insurance premiums if required solely for this Agreement; Subconsultant costs (includes Subconsultant's wages and direct non-labor costs); Such other allowable items as approved by LPA, or State on LPA's behalf.

- 1) A non-labor cost charged as a direct cost cannot be included in Consultant's overhead rate. If for reasons of practicality, Consultant is treating a direct non-labor cost category, in its entirety, as an overhead cost, then costs from that category are not eligible to be billed to this project as a direct expense.
- 2) Subconsultant costs may not exceed the costs shown on the attached Consultant's Fee Proposal for each Subconsultant unless agreed upon by the Consultant and LPA, or State on LPA's behalf. Subconsultant costs (labor and direct non-labor costs) must have the same level of documentation as required for Consultant.
- 3) The following direct non-labor costs will be reimbursed at actual costs, not to exceed the rates as shown below.
 - a) **TRANSPORTATION** – Automobile rentals, air fares, and taxi/shuttle transportation will be actual reasonable cost and if discounts are applicable, the Consultant shall give LPA the benefit of all discounts. Receipts must be submitted with invoices.
 - b) **MILEAGE** – The reimbursement for mileage associated with the use of company owned vehicles will be the prevailing standard rate as established by the Internal Revenue Service (IRS) through its Revenue Procedures. Reimbursement for mileage associated with the use of a privately owned vehicle (POV), is limited to the lesser of:
 - (i) The mileage rate that the Consultant reimbursed to the person who submitted the claim for POV use, or
 - (ii) The prevailing standard rate as established by the IRS.
 - c) **LODGING** – The reimbursement for lodging rates will be limited to the prevailing standard rate as indicated on the U.S. General Services Administration's (GSA) website at <http://www.gsa.gov/portal/category/100120>. Consultant shall give State the benefit of all lodging discounts. Receipts must be submitted with invoices.
 - d) **MEALS** – The reimbursement for meals will be limited to the prevailing standard rate as indicated on the GSA website noted above. Expenses for alcoholic beverages are not allowed. Consultant shall give State the benefit of all meal discounts.
 - (i) For Consultant and its employees to be eligible for the meal allowance, the following criteria must be met.

Breakfast:

 - Employee is required to depart at or before 6:30 a.m., or
 - Employee is on overnight travel.

Lunch:

- Employee must be on overnight travel. No reimbursement for same day travel.
- Employee is required to leave for overnight travel at or before 11:00 a.m., or
- Employee returns from overnight travel at or after 2:00 p.m.

Dinner:

- Employee leaves for overnight travel at or before 5:00 p.m, or
 - Employee returns from overnight travel or work location at or after 7:00 p.m., or
 - Employee is on overnight travel.
- (ii) Meals are not eligible for reimbursement if the employee eats within 20 miles of the headquarters town of the employee.
- (iii) Meal receipts must itemize all food and drink purchased. A credit card receipt alone is not sufficient documentation.
- (iv) Reimbursement for meal gratuities/tips will be whatever is usual, or customary, but will not exceed 20 percent.

- C. Overhead Costs include indirect labor costs, indirect non-labor costs, and direct labor additives that are allowable in accordance with Federal Acquisition Regulations 48 CFR 31 (Contract Cost Principles and Procedures). Overhead costs are to be allocated to the project as a percentage of direct labor costs. The Consultant will be allowed to charge the project using its actual allowable overhead rate. Overhead rate increases that occur during the project period will not be cause for an increase in the maximum amount established in this agreement.

5. INVOICES AND PROGRESS REPORTS

- A. Documents submitted to State, including invoices, supporting documentation, and other information are subject to disclosure by State under the Nebraska Public Records Act found at Neb.Rev.Stat. § 84-712 et.seq. Accordingly, Consultant shall redact or not submit to State information that is confidential, including, but not limited to, financial information such as social security numbers, tax ID numbers, or bank account numbers. Consultant understands that State does not have sufficient resources to review and redact confidential information submitted by Consultant. If such confidential information is submitted, Consultant shall have no right of action of any kind against State for the disclosure of such information.
- B. Consultant shall promptly submit invoices to LPA, or State on *LPA's behalf*, no more frequently than monthly. Invoices must present actual direct labor, Subconsultant costs and other direct non-labor costs, and actual overhead, as well as the Fee for Profit based upon the actual direct labor and overhead costs billed for that period. State law may prohibit the payment of an invoice that includes charges for services rendered more than two (2) years prior to State's receipt of the invoice.
- C. Consultant must submit an invoice for all services rendered even if the total agreement amount will be, or has been, exceeded.
- D. Content of Invoice Package
- 1) Consultant's Invoice:
- i. The first page of an invoice must identify the invoice number, invoice date, invoicing period (beginning date and ending date of services), and agreement or task order number.

- ii. The invoice or accompanying supporting documentation must identify each employee by name and classification, the hours worked, and the actual labor cost for each employee.
 - iii. Direct non-labor expenses:
 - 1. Direct non-labor expenses, other than travel-related expenses, must be itemized and provide a complete description of each item billed with supporting receipts or invoices.
 - 2. Travel-related expenses must be summarized and submitted on NDOT Form 163 (see below). Supporting receipts must be submitted with DNDOT Form 163 when invoicing for these expenses.
 - 3. All supporting receipts must be kept as required in Section 17
CONSULTANT COST RECORD RETENTION.
 - iv. Subconsultant Services: Consultant shall require subconsultants to provide the same supporting documentation, invoices, and receipts as Consultant is required to retain and submit.
- 2) Cost Breakdown Form: Each invoice package must include a completed "Cost Breakdown Form" (NDOT Form 162). This form is available on the Department of Transportation's website at <http://dot.nebraska.gov/business-center/consultant/>.
- 3) Travel Log: If invoice contains any travel-related expenses, a completed "Invoice Travel Log" (NDOT Form 163) must be submitted with the invoice package. This form is also available on the Department of Transportation's website at <http://dot.nebraska.gov/business-center/consultant/>. Upon approval by State, Consultant may use a substitute Invoice Travel Log provided it documents substantially the same information as NDOT Form 163. The Travel Log must document the employee name, locations traveled, date/time of departure to the project, date/time of return to the headquarters town, and expenses for transportation, meals, and lodging.
- 4) Progress Report: A Progress Report must accompany the invoice package and document Consultant's work during the service period. If an invoice is not submitted monthly, a Progress Report must be submitted at least quarterly, either with an invoice or, if Consultant does not submit an invoice, via email to LPA and State's Project Coordinator. Progress Report must include, but is not limited to, the following:
- i. A description of the Services completed for the service period to substantiate the invoiced amount.
 - ii. A description of the Services anticipated for the next service period
 - iii. Listing of information Consultant determines is needed from LPA, or State on LPA's behalf.
 - iv. Percent of Services completed to date
- E. All invoice packages (invoice, progress report, required NDOT Forms, supporting material) must be submitted electronically through State's invoice workflow system OnBase, for review, approval, and payment. The user guide for the OnBase system along with training videos can be found at <http://dot.nebraska.gov/business-center/consultant/onbase-help/>.

6. PROGRESS PAYMENTS

State, on LPA's behalf will pay Consultant upon receipt of Consultant's invoice and determination by LPA and State that the invoice and progress report adequately substantiate the Services provided, and the Services were completed in accordance with this Agreement. Payments will not be made if the progress report does not provide adequate substantiation for the Services or LPA or State determines that the Services have not been properly completed. State, on LPA's behalf, will make a reasonable effort to pay Consultant within 30 days of receipt of Consultant's invoices.

7. PROMPT PAYMENT CLAUSE

Consultant shall include a "Prompt Payment Clause" as a part of every subcontract (including second tier subcontracts) for work. The "Prompt Payment Clause" will require payment to all subconsultants for all work completed, within twenty (20) calendar days of receipt of progress payments from the State for said work. The "Prompt Payment Clause" will also stipulate the return of retainage within thirty (30) calendar days after the subconsultants achieves the specified work as verified by payment from the State. Failure by Consultant to carry out the requirements of the "Prompt Payment Clause" and/or timely return of any retainage, without just cause, is a material breach of this Agreement, which may result in the State withholding payment from Consultant until all delinquent payments have been made (no interest will be paid for the period that payment was withheld), termination of this Agreement, or other such remedy as the State deems appropriate.

Consultant may withhold payment only for just cause and must notify the State, in writing, of its intent to withhold payment prior to actually withholding payment. Consultant shall not withhold, delay or postpone payment without first receiving written approval from the State.

8. SUSPENSION OF PAYMENTS

When work is suspended on this project, payments shall be suspended until the work resumes or this Agreement is terminated. Consultant shall not be compensated for any work completed or costs incurred on the project after the date of suspension. When work is suspended for convenience, Consultant shall be compensated for work completed or costs incurred prior to the date of suspension. When work is suspended for cause, payments shall be withheld until all remedial action is completed by Consultant to the satisfaction of LPA and State, at Consultant's sole cost.

9. FINAL INVOICE AND PAYMENT

Upon completion of the Services under this Agreement, Consultant shall submit their final invoice. Consultant shall review the overhead costs billed to-date to determine if the overhead rates used on the progress billings match the actual allowable rate applicable to the time period that the labor was incurred. If cost adjustments are necessary, it should be reflected on the final invoice. If a particular year's actual overhead has not yet been computed or approved by State, the most recent year's accepted rate should be applied. Upon receipt of final invoice and determination by LPA and State that the invoice and Progress Report adequately substantiate the Services provided and the Services were completed in accordance with this Agreement, State, on LPA's behalf, will pay Consultant. The acceptance by Consultant of the final payment will constitute and operate as a release to LPA and State for all claims and liability to Consultant, its representatives, and assigns,

for any and all things done, furnished, or relating to the Services rendered by or in connection with this Agreement or any part thereof.

10. AGREEMENT CLOSE-OUT

Upon submitting its final invoice, the Consultant must complete and submit to the LPA, or State on LPA's behalf, a Notification of Completion Form (NDOT Form 39). The form is available on the Department of Transportation's website at <http://dot.nebraska.gov/business-center/consultant/> and must be submitted electronically in accordance with the instructions on the form.

11. INELIGIBLE COSTS

LPA is not responsible for costs incurred prior to the Notice to Proceed date or after the completion deadline date set out in SECTION 6. NOTICE TO PROCEED AND COMPLETION SCHEDULE of this Agreement or as approved in writing by LPA, or State on LPA's behalf.

12. FEDERAL COST PRINCIPLES

LPA will not make payments directly to Consultant for services performed under this agreement. Instead, the State will serve as a paying agent for LPA, and will pay Consultant directly for properly submitted and approved invoices using both LPA and Federal funds based on the applicable project federal cost participation percentage. The following process shall apply whenever the LPA, the State or the FHWA determines that certain costs, previously paid to Consultant, should not have been paid with federal funds by the State to Consultant. Consultant shall immediately repay the State the federal share of the previously paid amount and may invoice LPA for the costs repaid to the State. LPA shall promptly pay the full amount of the invoice from its own funds unless LPA, in good faith, disputes whether the Consultant is entitled to the payment under the agreement or the amount of the invoice. In the event of a dispute between LPA and Consultant, the dispute resolution process shall be used by the parties. For performance of Services as specified in this Agreement, State, on LPA's behalf, will pay Consultant subject to the terms of this Agreement and all requirements and limitations of the federal cost principles contained in the Federal Acquisition Regulations 48 CFR 31 (Contract Cost Principles and Procedures).

13. SUBCONSULTANT OVER-RUNS AND UNDER-RUNS

Consultant shall require any subconsultant to notify Consultant if at any time the subconsultant determines that its costs will exceed its negotiated fee estimate (over-run). Consultant shall not allow any subconsultant costs to over-run without prior written approval of the LPA, or State on LPA's behalf. Consultant understands that the amount of any subconsultant cost under-run will be subtracted from the total compensation to be paid to Consultant under this Agreement, unless prior written approval is obtained from LPA, or State on LPA's behalf, and, when applicable, Federal Highway Administration (FHWA).

14. OUT-OF-SCOPE SERVICES AND CONSULTANT WORK ORDERS

LPA, or State on LPA's behalf, may request that Consultant provide services that, in the opinion of Consultant, are in addition to or different from those set out in the Scope of Services. When LPA, or State on LPA's behalf, decides that these out-of-scope services may require an adjustment in costs, Consultant shall provide in writing:

A. A description of the out-of-scope services,

- B. An explanation of why Consultant believes that the out-of-scope services are not within the original Scope of Services and additional work effort is required,
- C. An estimate of the cost to complete the out-of-scope services. Consultant must receive written approval from LPA, or State on LPA's behalf, before proceeding with the out-of-scope services. Before written approval will be given by LPA, or State on LPA's behalf, LPA or State must determine that the situation meets the following criteria:
 - 1) The out-of-scope services are not within the original Scope of Services and additional work effort is required;
 - 2) The out-of-scope services are within the basic scope services under which Consultant was selected and Agreement entered into; and
 - 3) It is in the best interest of State that the out-of-scope services be performed under this Agreement.

Once the need for a modification to the Agreement has been established, the State, on LPA's behalf, will prepare a supplemental agreement. If the additional work requires the Consultant to incur costs prior to execution of a supplemental agreement, the LPA, or State on LPA's behalf, may issue a written notice to proceed prior to completing the supplemental agreement (for non-Federal aid projects) or shall use the process set out below (for Federal aid PE projects):

The Consultant Work Order (CWO) – NDOT Form 251 shall be used to describe and provide necessary justification for the additional scope of services, effort, the deliverables, modification of schedule, and to document the cost of additional services. The CWO form is available on the Department of Transportation's website at <http://dot.nebraska.gov/business-center/consultant/>. The CWO must be executed to provide authorization for the additional work and to specify when that work may begin. The agreement will be supplemented after one or more CWOs have been authorized and approved for funding.

15. TERMINATION COST ADJUSTMENT

If the Agreement is terminated prior to project completion, LPA and State will compare the percentage of work actually completed by Consultant, to the total amount of work contemplated by this Agreement. This comparison will result in a payment by the State, on behalf of LPA, for any underpayment, no adjustment, or a billing to Consultant for overpayment. The State's final audit may result in an additional cost adjustment.

16. AUDIT AND FINAL COST ADJUSTMENT

Upon LPA's and State's determination that Consultant has completed Services under this Agreement, State, or its authorized representative, may complete an audit review of the payments made under this Agreement. The Parties understand that the audit may require an adjustment of the payments made under this Agreement. Consultant agrees to reimburse State for any overpayments identified in the audit review, and State agrees to pay Consultant for any identified underpayments.

17. CONSULTANT COST RECORD RETENTION

Consultant shall maintain, and also require that its Subconsultants/Subcontractors maintain, all books, documents, papers, detailed receipts, accounting records, and other evidence pertaining to costs incurred and shall make such material available for examination at its

EXHIBIT "B"
FEES AND PAYMENTS

office at all reasonable times during the agreement period and for three (3) years from the date of final cost settlement by FHWA and project closeout by the State. Such materials must be available for inspection by the State, FHWA, or any authorized representative of the federal government, and when requested, Consultant shall furnish copies.